VOLUME XXIX

NUMBER TWO

THE NATIONAL GEOGRAPHIC MAGAZINE

FEBRUARY, 1916

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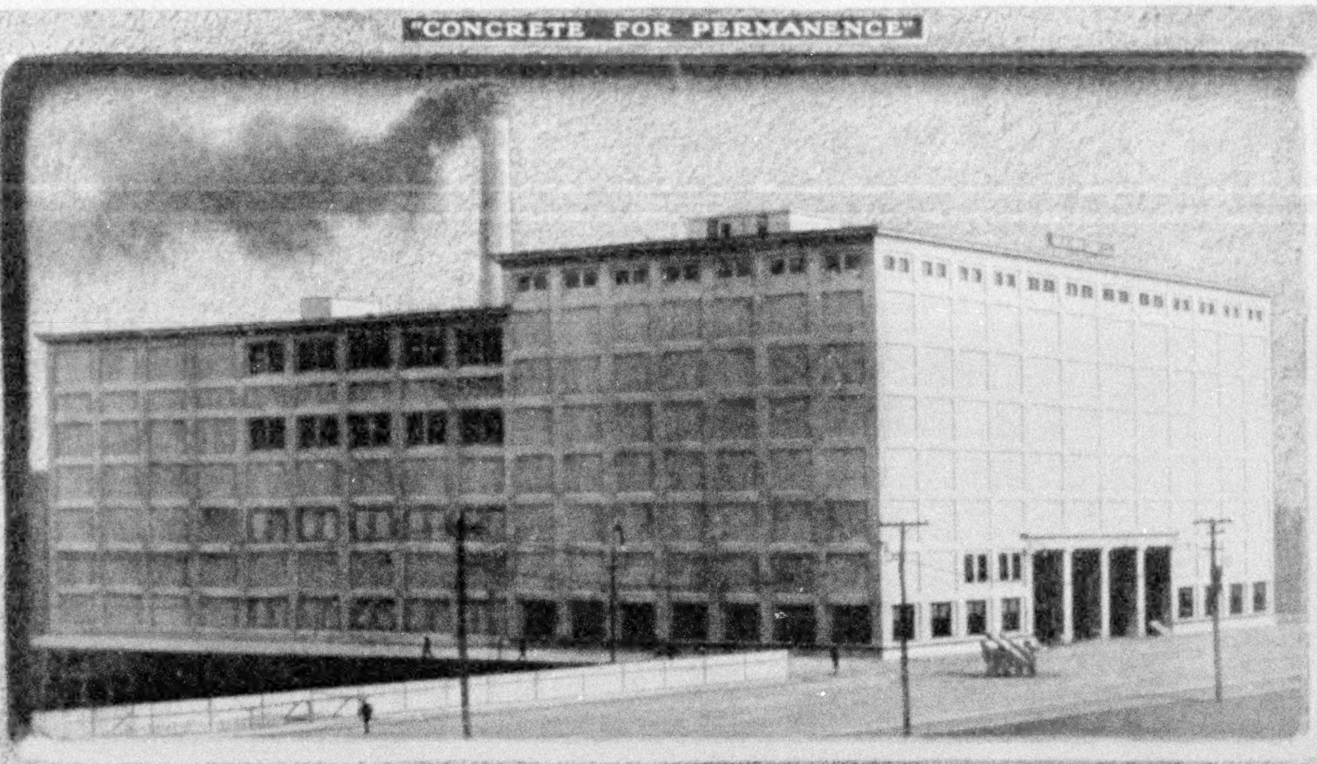

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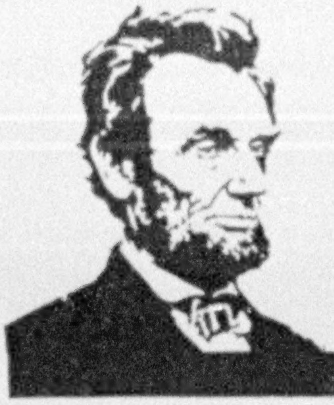
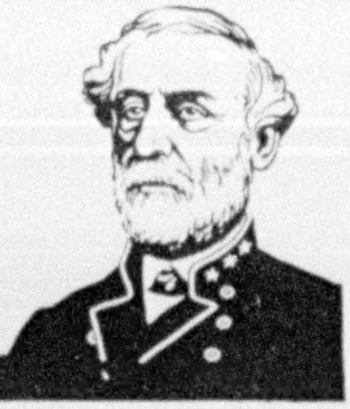


Lincoln *and* Lee agreed on one thing



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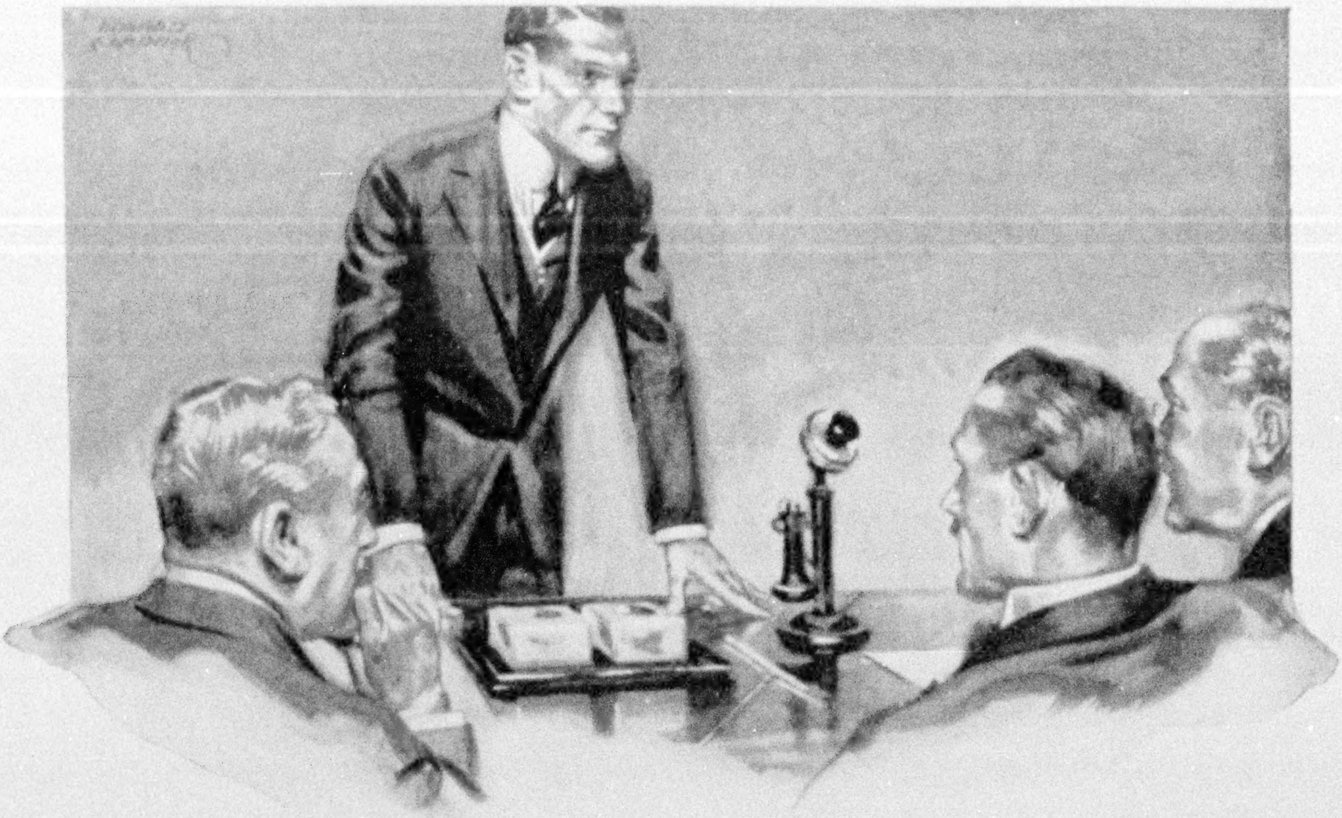

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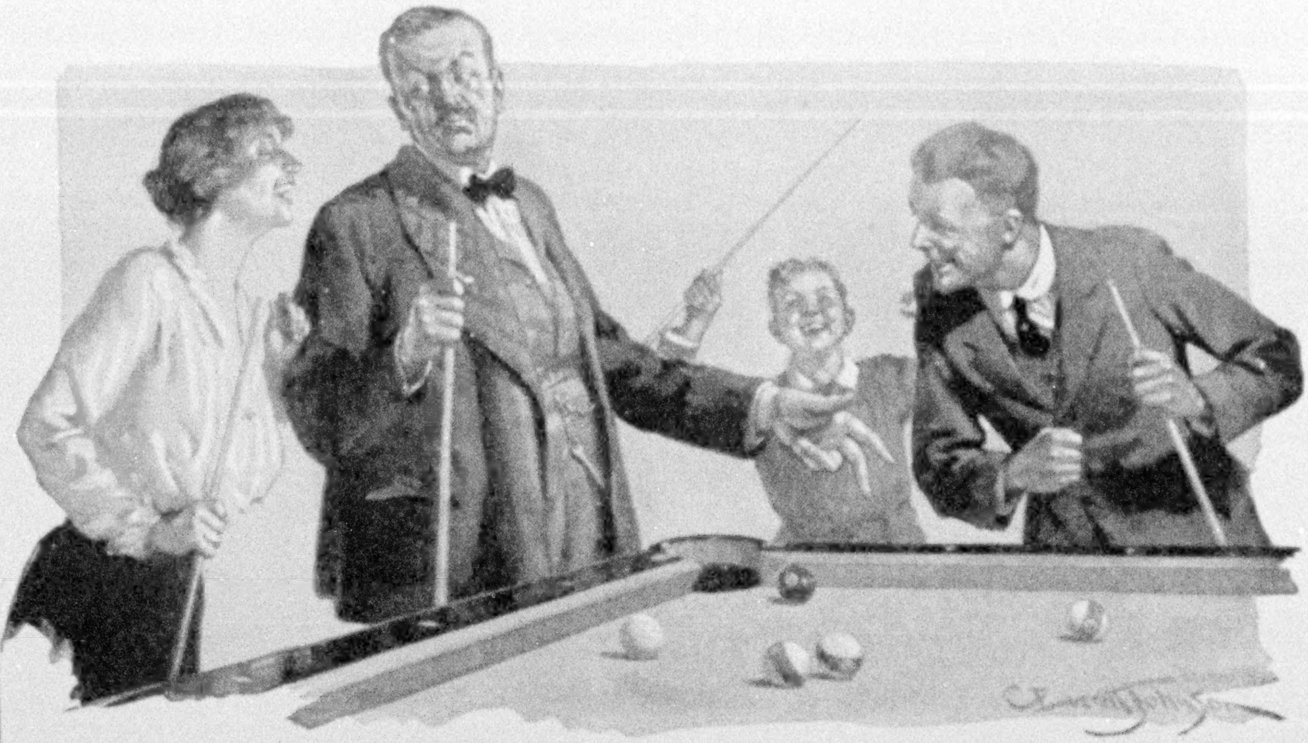

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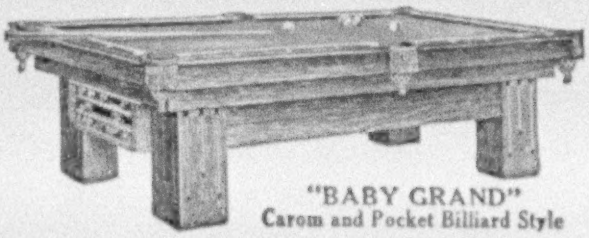

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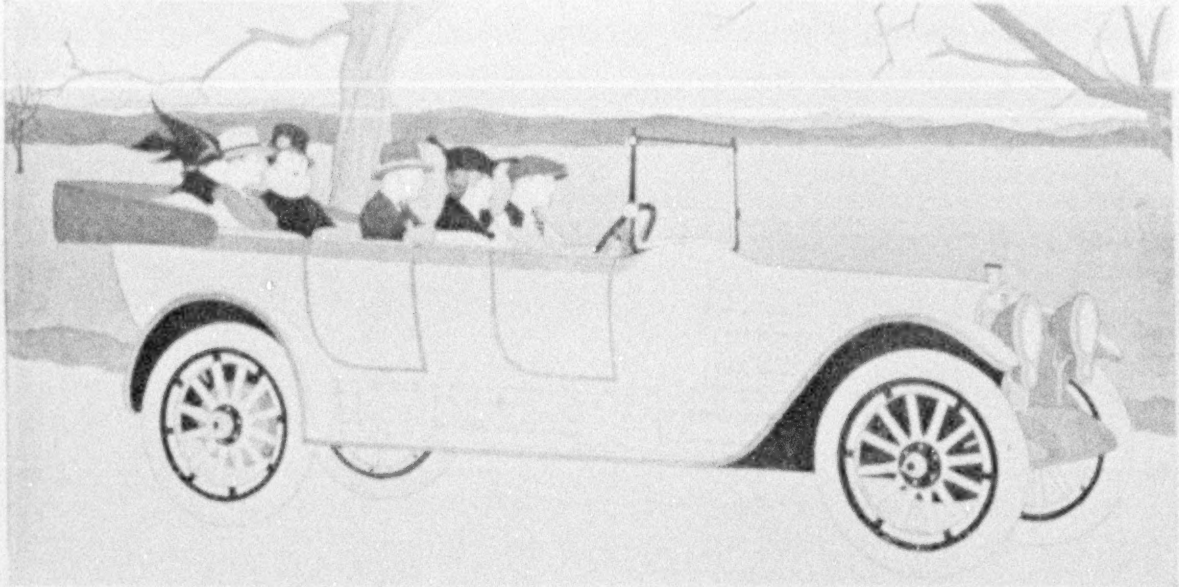

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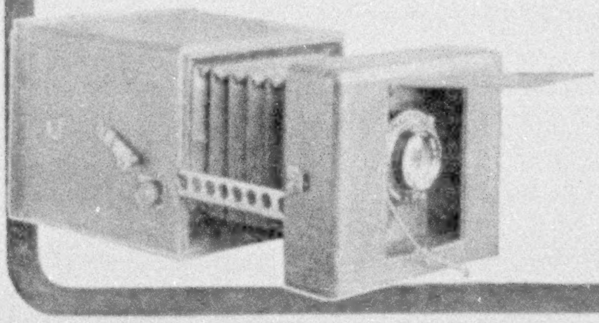

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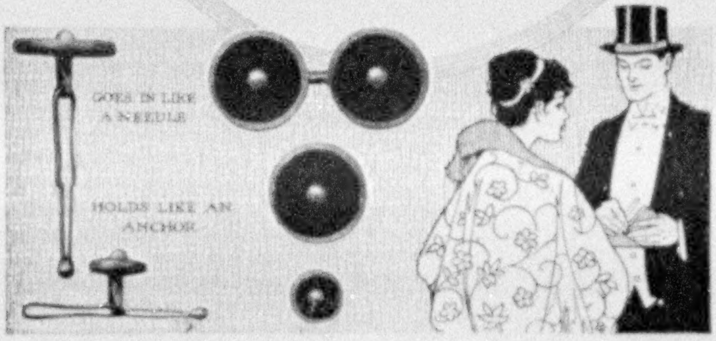

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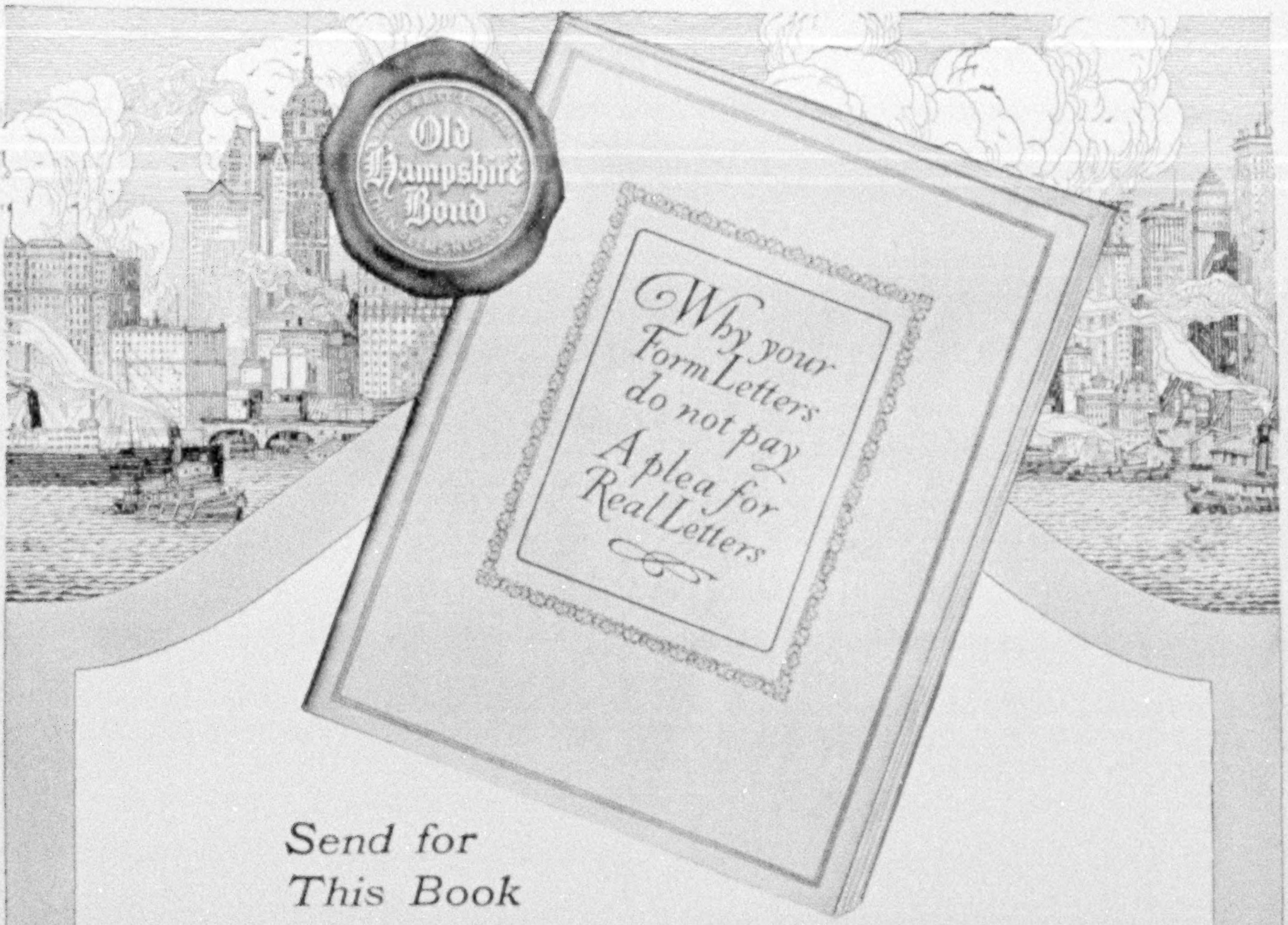
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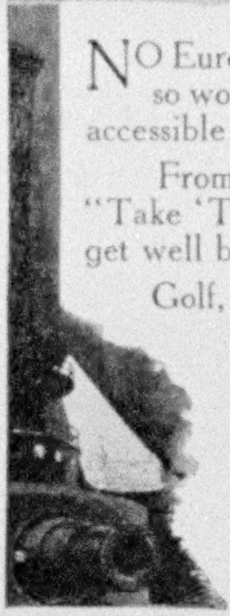

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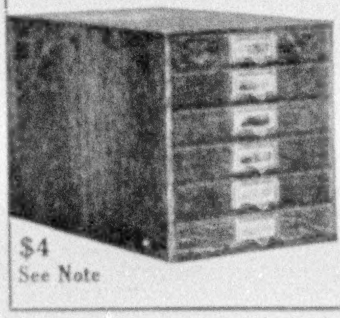

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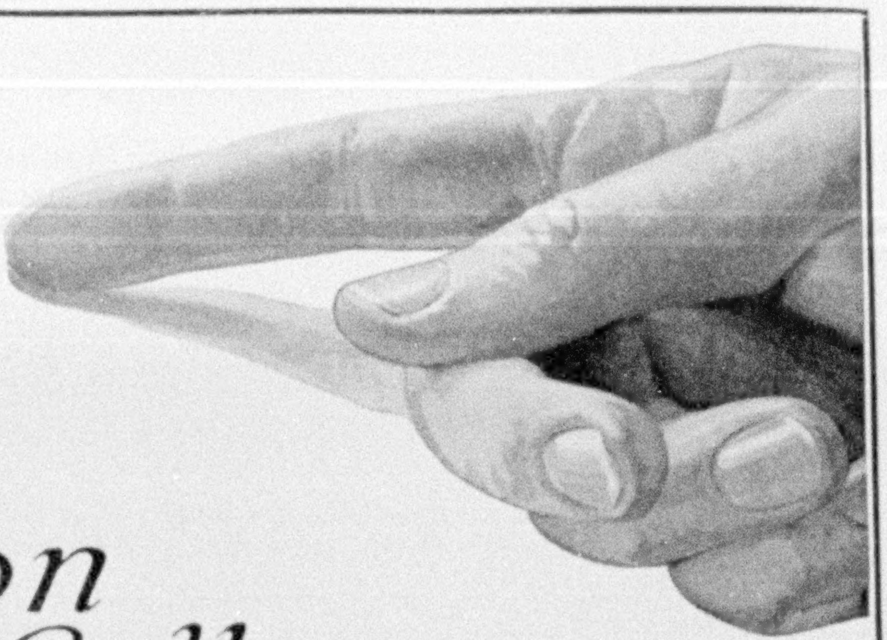

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In reality there is but one Klaxon and that is made by the Lovell-McConnell Mfg. Co. of Newark, N. J. The only way to be sure a signal *is* a Klaxon is to look for—*and find*—the Klaxon nameplate.

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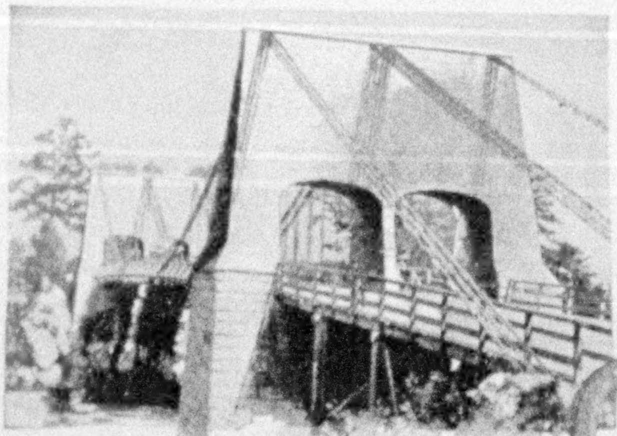
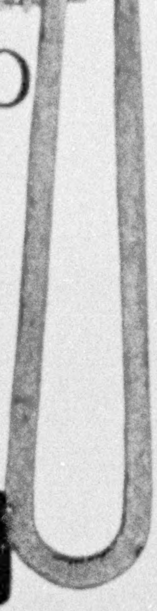
A Century of Exposure to the Weather Did Not Rust These Iron Chains



1798 – 1910

Iron Chain suspension bridge at Newburyport, Mass. Built in 1798, torn down 1910



After standing for over a hundred years in rain, fog, air and snow, their covering of rust was no thicker than a coat of paint.

Remarkable? Yes. But the record could be surpassed with Armco (American Ingot) Iron, because Armco Iron is purer in content and more uniform in texture than the iron in these chains that lasted for so many years.

These hand-forged chains resisted rust because they were made of nearly pure iron.

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as no other ordinary iron can, not only because it is pure—the purest made—but because it is the most nearly perfect in respect to evenness, the absence of gases and all the other qualities that form the basis of rust-resistance.

Armco Iron's rust-resistance puts it foremost in the minds of manufacturers and users of sheet metal products of durability.

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This book gives scores of products made of Armco Iron by leading manufacturers. If you have difficulty in getting Armco Iron products from your tinner, roofer or hardware dealer, write to us and we will see that you get what you need.

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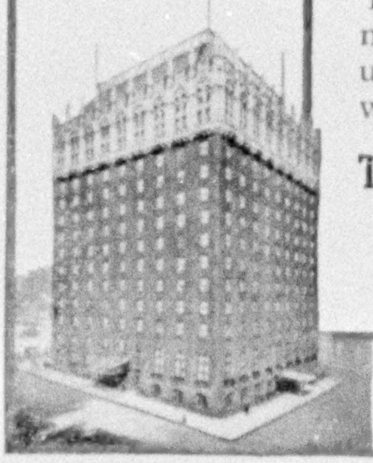
Learn, too, about Armco Iron for other uses—window frames and sashes, ventilators, skylights, cornices, metal lath, smoke stacks, heating pipes, enameling material, water tanks, gas tanks, iron boiler tubes, etc.



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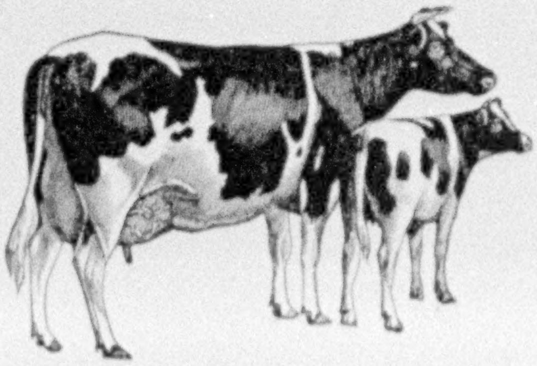

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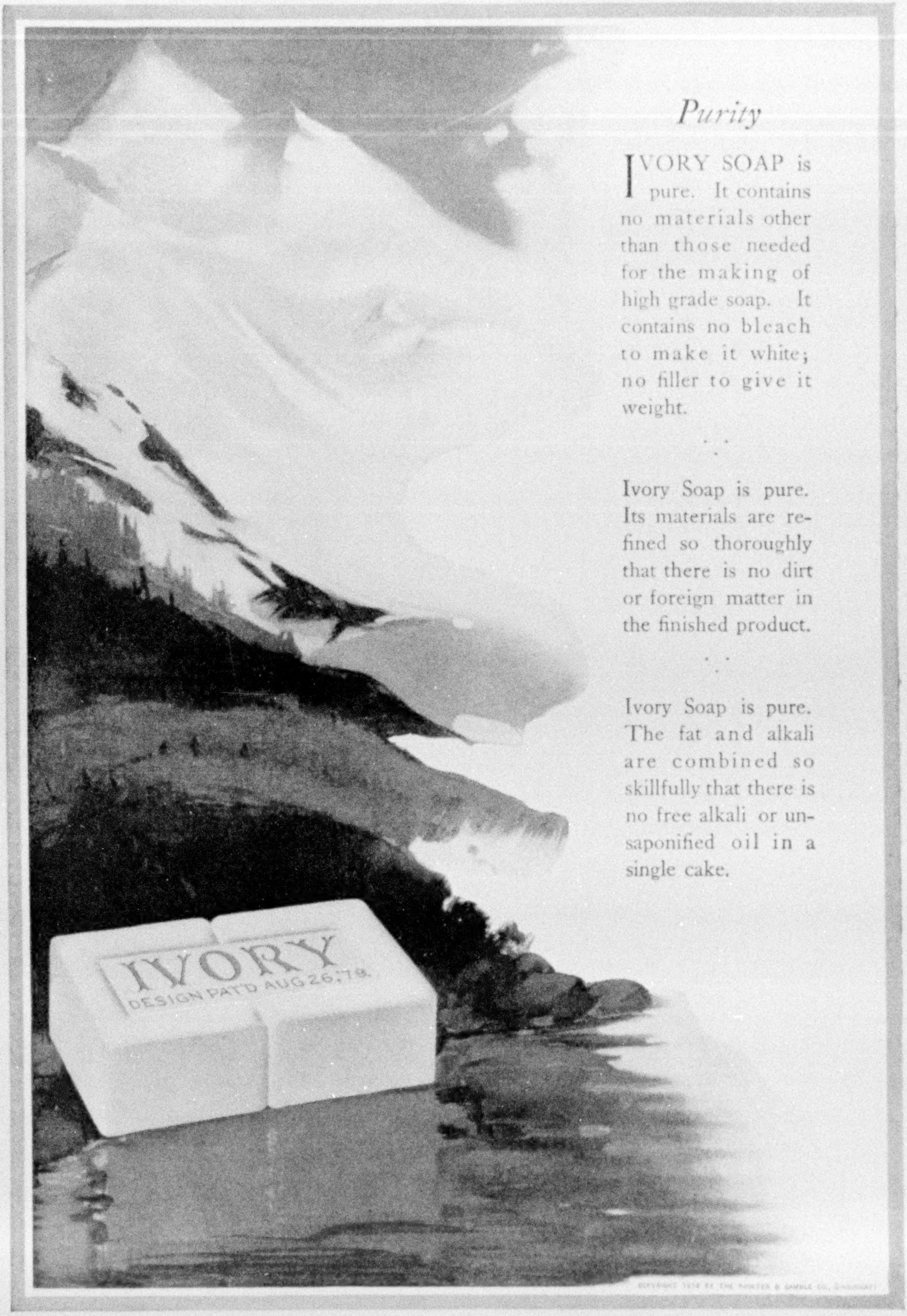

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VOL. XXIX, NO. 2 WASHINGTON FEBRUARY, 1916

THE NATIONAL GEOGRAPHIC MAGAZINE

HOW OLD IS MAN?

BY THEODORE ROOSEVELT

OF RECENT years scientific writers have for convenience sake distinguished as prehistory that part of man's long history on this earth which precedes the period for which we possess written records, or at least records that may be treated as in some sort their equivalent.

This prehistory of man is, of course, immensely longer than what can, by any stretch of language, be called his true history. At present our historical records begin in Egypt and Mesopotamia, using the latter word to include the entire country adjacent to the Tigris and Euphrates; and the first dim indications of anything that can properly be called history do not go back seven thousand years, while it is not until some five thousand years ago that we begin to be on continuously firm historical ground.

At that time Europe was still in the prehistoric stage, and its inhabitants knew practically nothing of either metals or writing, being in the neolithic or polished stone cultural stage. In America history cannot be said to have begun much before the advent of the white man, although there are extraordinary architectural remains of old and strange civilizations in Mexico, Central America, and Peru.

"Old," however, is a relative term. The earliest monuments beside the lower Nile and lower Euphrates, like the earliest monuments on the high plateaus or in the dense tropical forests of the new world, are purely modern—are things of yesterday—when measured by the hoary antiquity into which we grope when we attempt to retrace the prehistory of man, the history of his development from an apelike creature struggling with his fellow-brutes, to the being with at least longings and hopes that are half divine.

All our knowledge of man's slow progress during the immense stretch of time covering this development has been obtained during the last two generations; it is still of a sketchy and fragmentary kind, and we cannot hope that it will ever be complete; but already we know enough to indicate the rough outlines of some of the most important of the developmental stages, and as regards certain of the later stages to fill in various details.

THE REPTILES DISAPPEAR AND MAMMALS RULE THE EARTH

In geological or paleontological parlance, the Age of Mammals is known as the Tertiary period. At the beginning of this period the gigantic creatures with which the Age of Reptiles, the secondary period of the earth's history, culminated, had all died out.

The mammals, which for ages had existed as small, warm-blooded beasts of low type, now had the field much to themselves. They developed along many different lines, including that of the primates, from which came the monkeys, the anthropoid apes, and finally the half-human predecessors of man himself. At about the time when these last appeared

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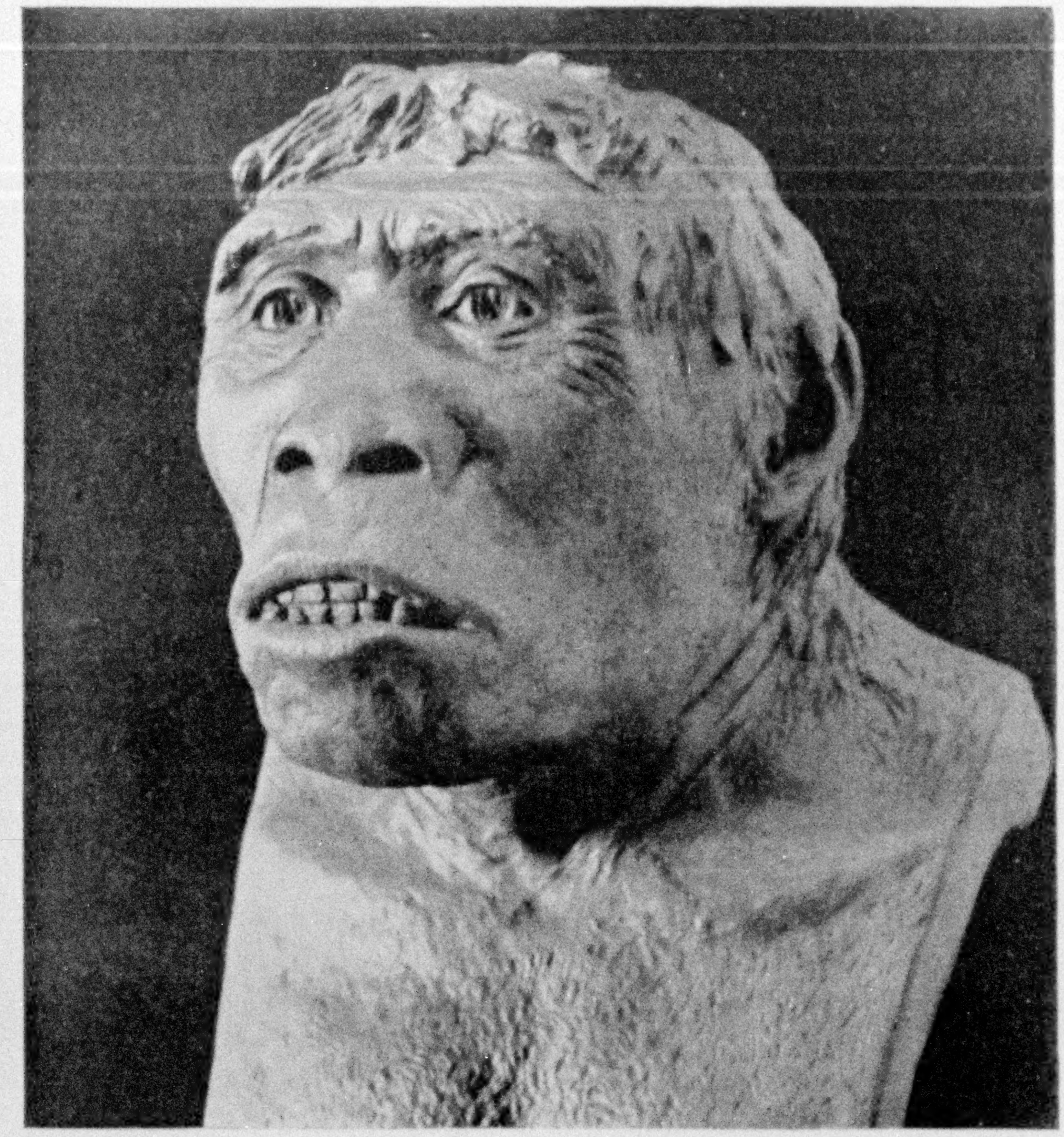


Photograph from Osborn's "Men of The Old Stone Age"

THE APE MAN OF JAVA, A PREHUMAN CREATURE WHO LIVED PROBABLY 500,000 YEARS AGO (SEE PAGE 120)

the Tertiary, or so-called Age of Mammals, came to a close with what is known as the Pliocene period.

The earth then already bore substantial resemblance to what it is today, although with a warmer climate, and the mammalian life, although infinitely richer than at present, included creatures substantially kin to most of those now existing. Laymen must remember that these different ages or periods merged gradually into one another, and that the names we give them are merely necessary terms of convenience.

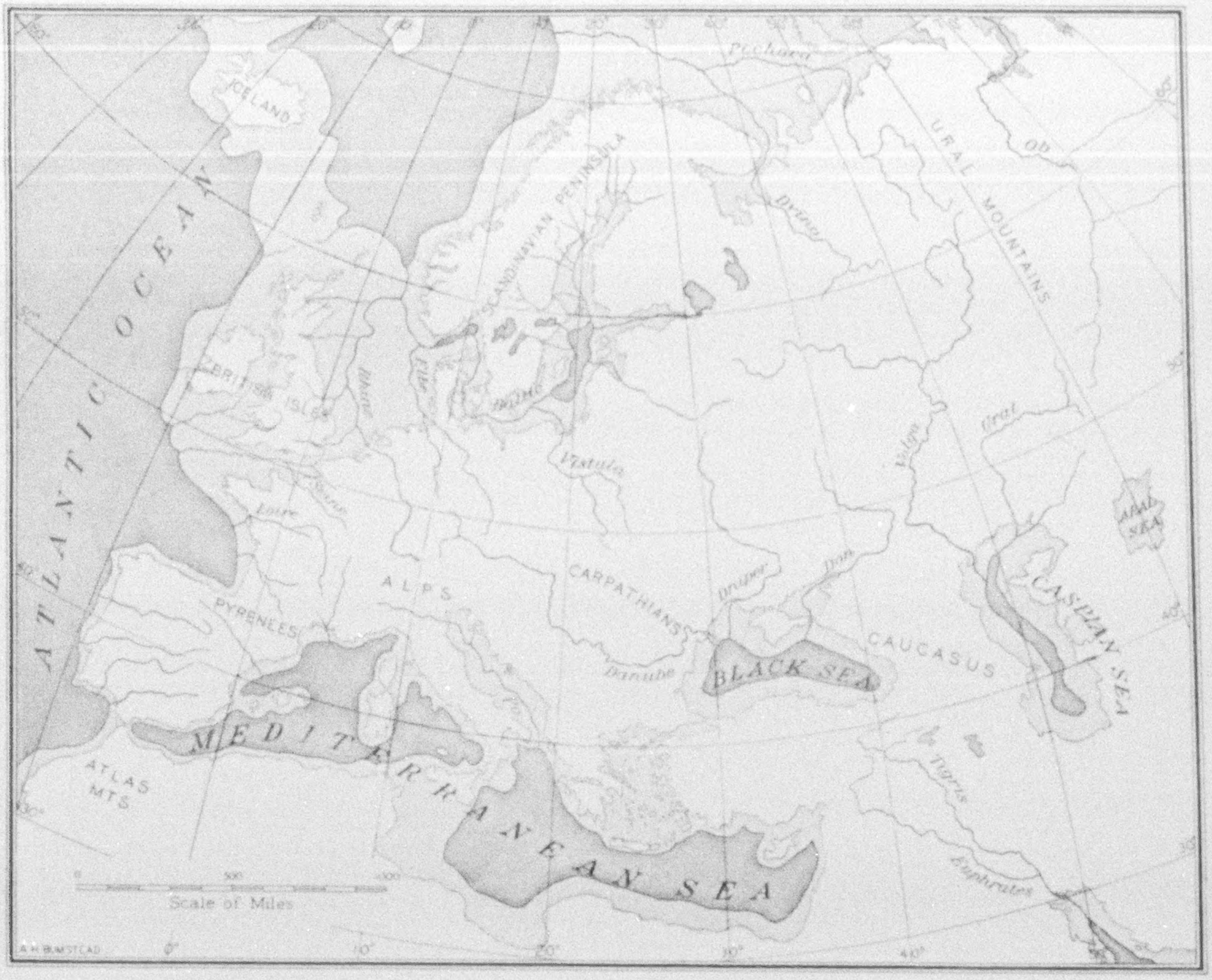
The Pleistocene Age followed the Pliocene. It is sometimes called the Quaternary. Throughout its duration the world went through many physical changes. Continents rose and fell, became connected and again disconnected; mountain chains were worn down and others thrust upward; lakes filled and vanished; periods of great cold were followed by periods of warmth.

Because of these changes the waves of life flowed hither and thither. During its early stages this age could appropriately be called the Age of the Horse, the Lion, and the Elephant, for these three beasts in many forms abounded on every continent of the globe except Australia.

But man was slowly developing from the half-human to the wholly human throughout this immense period of time, and at its close the Age of Man may fairly be said to have begun.

THE RECORDS SHOW THAT MAN HAS LIVED IN FRANCE FOR AT LEAST 100,000 YEARS

It is in France that the most complete records of prehistoric man are found—


ICELAND
ATLANTIC OCEAN
SCANDINAVIAN PENINSULA
BRITISH ISLES
Petchora
Ob
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Dwina
Rhine
Elbe
Vistula
Volga
Ural
ARAL SEA
Loire
Seine
ALPS
CARPATHIANS
PYRENEES
Dnieper
Don
BLACK SEA
Danube
CAUCASUS
CASPIAN SEA
MEDITERRANEAN SEA
ATLAS MTS
Tigris
Euphrates
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A.H. BUMSTEAD

AN OUTLINE MAP OF EUROPE AT A PERIOD WHEN THE BRITISH ISLES AND SCANDINAVIAN PENINSULA WERE A PART OF THE MAINLAND

Europe was then in the period of maximum continental elevation, in which the coast-lines were widely extended, connecting Africa and Europe in a single vast peninsula and affording free migration routes for animal and human races north and south, as well as east and west.

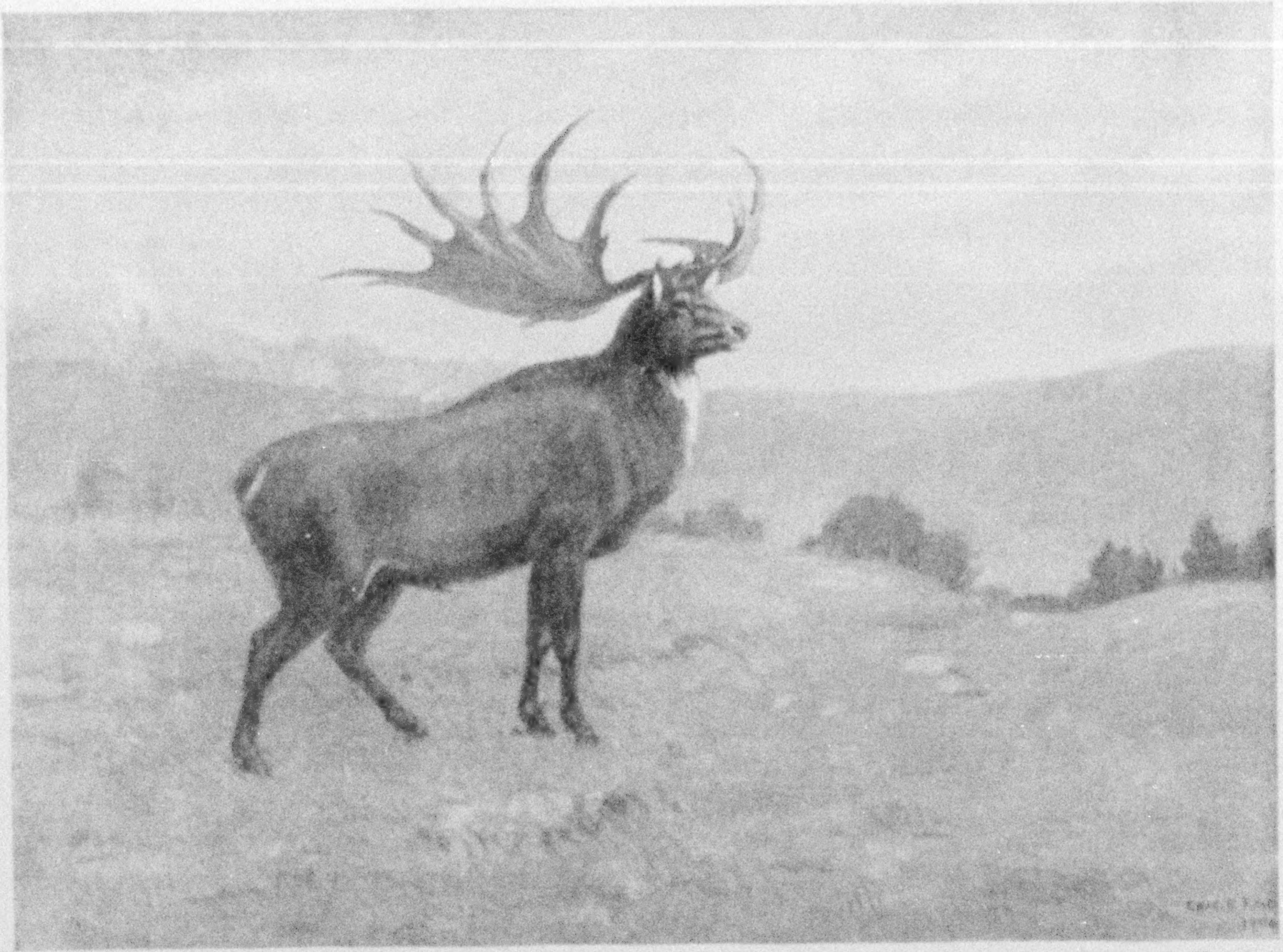
records which show a continuous human occupation of the region for at least a hundred thousand years; and French archæologists have taken the lead in deciphering these records. The countries of Europe immediately surrounding France also yield invaluable records; and in consequence our knowledge of the prehistory of man is almost, but not quite, confined to his development in Europe.

All the earlier divisions of this prehistory, stretching over an immeasurable period of time, are included in the culture stage known as paleolithic, so called because during these many hundreds of centuries the successive races of men used only chipped stone tools and implements. Following this immensely long Old Stone Age came in quick succession the relatively short ages known as those of New Stone, or polished stone, of Bronze, and of Iron.

THE MOST IMPORTANT BOOK ON THE EVOLUTION OF MAN SINCE DARWIN'S "DESCENT OF MAN"

The best book dealing in concise form with the hoary antiquity of man as he was up to the end of paleolithic times has just appeared and is by one of our fellow-countrymen. The author is Henry Fairfield Osborn, of the American Museum of Natural History.

Dr. Osborn's book covers in masterly manner the Old Stone Age of Europe. It therefore covers substantially all that we now know of the development of hu-



From a drawing by Charles R. Knight

THE IRISH ELK OF PLEISTOCENE EUROPE

This magnificent deer (found fossil in the Irish peat-bogs) was not a true elk, but an enormous fallow deer (recent examples of which still exist in Europe). The spread of the antlers was very great, as much as 10 feet in some cases. The animal stood 7 feet at the shoulder, and the head and feet were small in proportion to the general bulk. The females had no antlers. This deer first appeared in western Europe during the first inter-Glacial age, before the advent of man in western Europe.

manity* from the days of the ape-man of Java, through the hundreds of thousands of years during which the chinless pre-men dwelt in Europe, to the time when men of substantially the present type hunted the mammoth and the bison north and south of the Pyrenees, and drew and painted the great beasts on the walls of their home caverns.

This is the crucial period in the evolution of man from a strong and cunning brute into a being having dominion over all brutes and kinship with worlds lying outside and beyond our own. In Mr. Osborn's book this period is for the first time covered as a whole and treated as fully as our present knowledge permits. It is the most important work on the evolution of our own species that has appeared since Darwin's "Descent of Man."

Many works of high merit have dealt with phases of what is here covered, and some suggestive books of larger scope have been written. The whole subject has now been covered by a writer whose exhaustive and many-sided knowledge, whose long scientific training, whose natural insight, and whose singularly just and fair temper enable him to give us the first full, clear, and critical presentation and interpretation of all that has been discovered and soundly determined since Darwin wrote that one of his masterpieces which especially dealt with man.

This is a strong statement. Yet it is verified by an examination of the multitudinous works treating of the matter. There are books of the highest value

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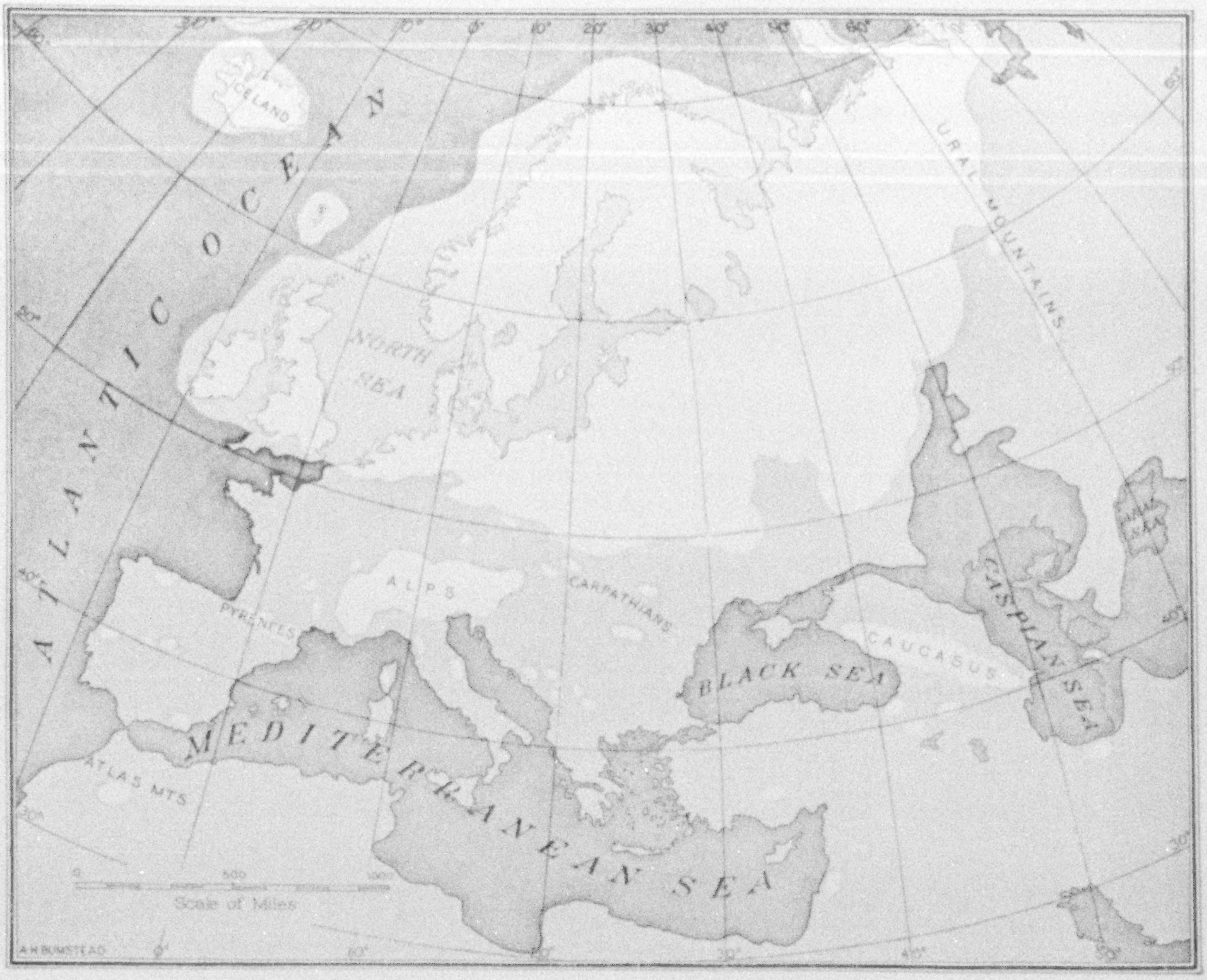
* "Men of the Old Stone Age: Their Environment, Life, and Art," by Henry Fairfield Osborn. New York: Charles Scribner's Sons.



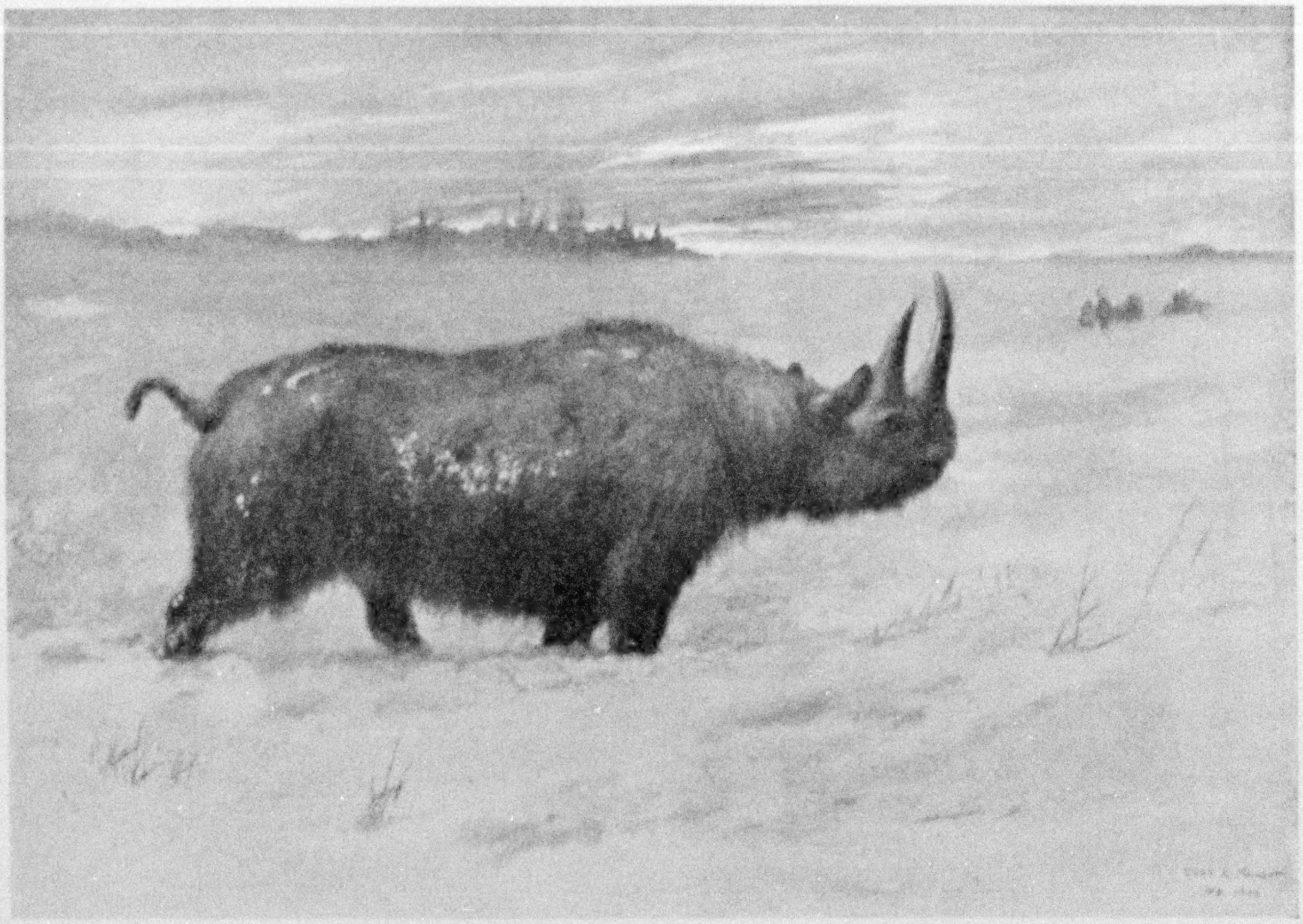
MAP OF EUROPE, SHOWING THE GREAT SHEET OF ICE THAT COVERED THE BRITISH ISLES, SCANDINAVIA, GERMANY, AND HALF OF RUSSIA DURING THE SECOND GLACIAL AGE

The ice fields and glaciers, shown in white on this map, then reached their greatest extension, and eastern Europe was depressed to such an extent that the Black and Caspian and Aral seas formed one continuous body of water. After the ice retreated the Heidelberg man appeared, an immigrant from Asia, probably 250,000 years ago (see page 119).

dealing with the archæological side, such as that of Dechelette, recently killed in battle (for, incidentally, the French archæologists do not permit their studies of the dead to shrivel their patriotic devotion to living duty), and the magnificent volumes of Cartaillac, Brenil, and Obermaier, which we owe to the generous scientific enthusiasm of the Prince of Monaco.

There are other books on the geological side of the period, such as the notable volumes of Chamberlin and Geikie, which could have been written only by specialized experts. There are many studies of human remains and of the remains of the accompanying beast faunas by French, English, and German writers. All of these are indispensable to the scholar; but each covers only one facet of the crystal.

Finally, there are books dealing with the general subject—excellent books—but none of them possessing all the qualities which are essential to the full understanding of the problem. Lord Avebury's "Prehistoric Times" was written when it was still necessary to argue with those who disbelieved in the antiquity of man, their reasons being substantially similar to those of the other conservatives who a couple of centuries earlier treated as impious the statement that the earth went round the sun.



From a drawing by Charles R. Knight

A CONTEMPORARY OF THE HEIDELBERG MAN, LONG SINCE EXTINCT: THE WOOLLY RHINOCEROS TICHORHINUS, PLEISTOCENE

The woolly rhinoceros (Pleistocene), a European form found frozen in Siberian ice fields. This singular creature, like the mammoth, was covered with long reddish wool, which served as an effective protection against the bitter cold of its native home (see page 119).

In Osborn's book for the first time everything is put together — geology, paleography, the known climatic changes, the plant life, including the succession and migrations of the various floras; the animal life, including the succession and migration of the various great mammalian faunas; and finally what is known of ancient man himself in these surroundings.

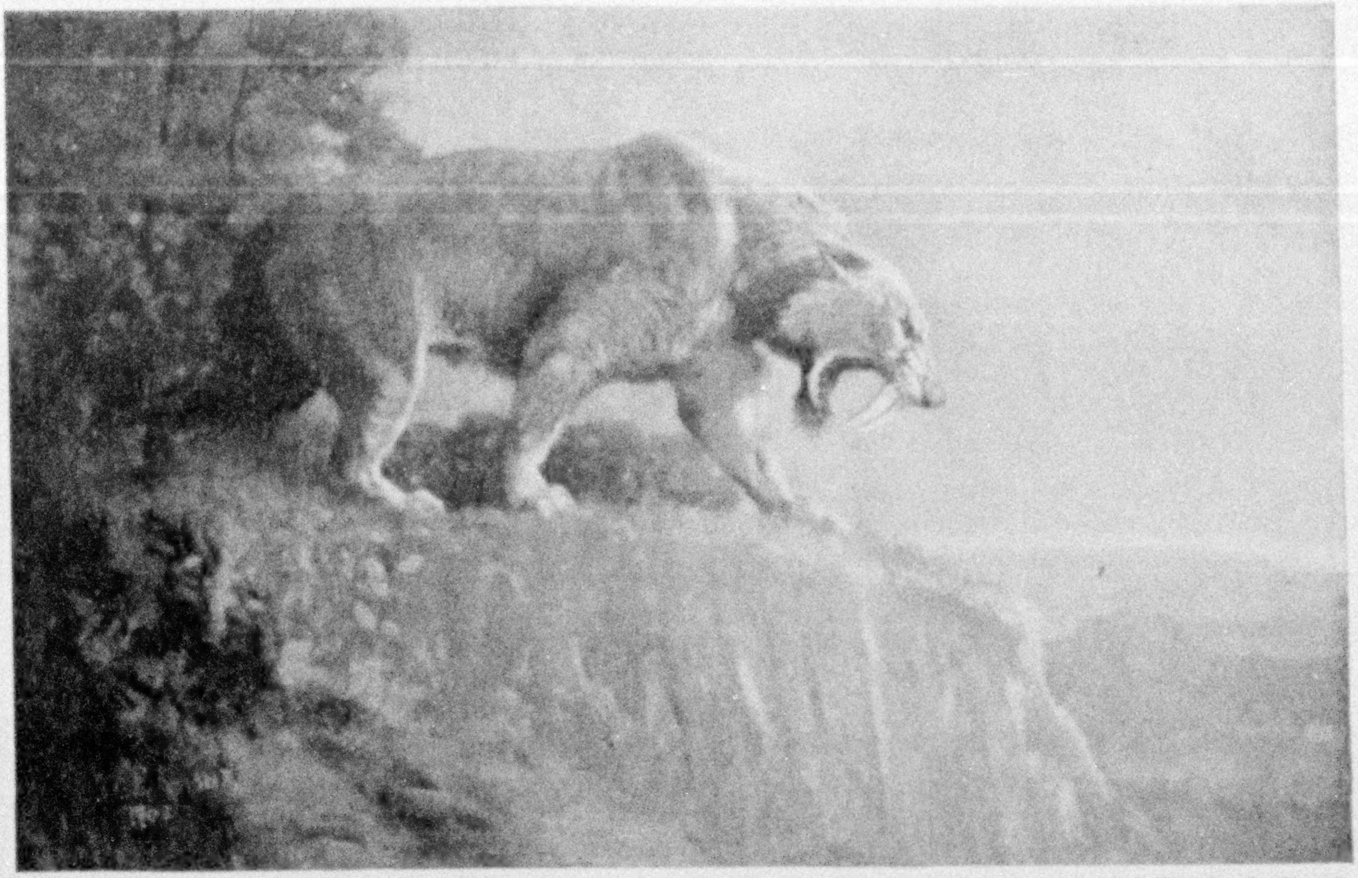
WHEN THE BRITISH ISLES WERE PART OF FRANCE AND THE BALTIC A FRESH-WATER LAKE

During the immense period of time when the Old Stone man dwelt in western Europe it was, as now, a peninsula of the huge Eurasiatic landmass. Again and again it was partially covered by ice-sheets from different centers of dispersal, chiefly the Alps and the region that includes what is now the Baltic Peninsula.

Slowly the land rose and fell. It was connected and disconnected by narrow land bridges with Africa. When the land encroached on the sea the British Islands became part of France and Flanders, and the Rhine and the Seine were huge rivers, compared to which the present-day Rhine and Seine look like brooks. The Baltic became a fresh-water lake. Then, again, the ocean recovered its own and extended far beyond its present limits. These changes were not cataclysms; probably changes as great are at this moment going on in the world. But to human perceptions such earth movements are so gradual as to be impossible of notice by any individual or generation.

UNLIKE ASIA AND THE AMERICAS, EUROPE DID NOT ORIGINATE BEASTS OR MEN

These climatic and geographic oscillations perhaps explain the apparent fact that Europe was not a center of origin



From a drawing by Charles R. Knight

THE SABER-TOOTHED TIGER, ANOTHER CONTEMPORARY OF THE HEIDELBERG MAN

Remains of this great feline are found in many portions of the globe, the particular specimen from which the picture was made being of South American origin. In many ways the creature was not a true cat, the high shoulders and short tail being rather bearlike than otherwise. The feet, however, were truly feline and were armed with many powerful claws. The long, saber-like canine teeth must have been very effective weapons, and could, no doubt, inflict terrible wounds upon an adversary. These teeth projected on either side of the lower jaw when the mouth was closed (see pages 119 and 123).

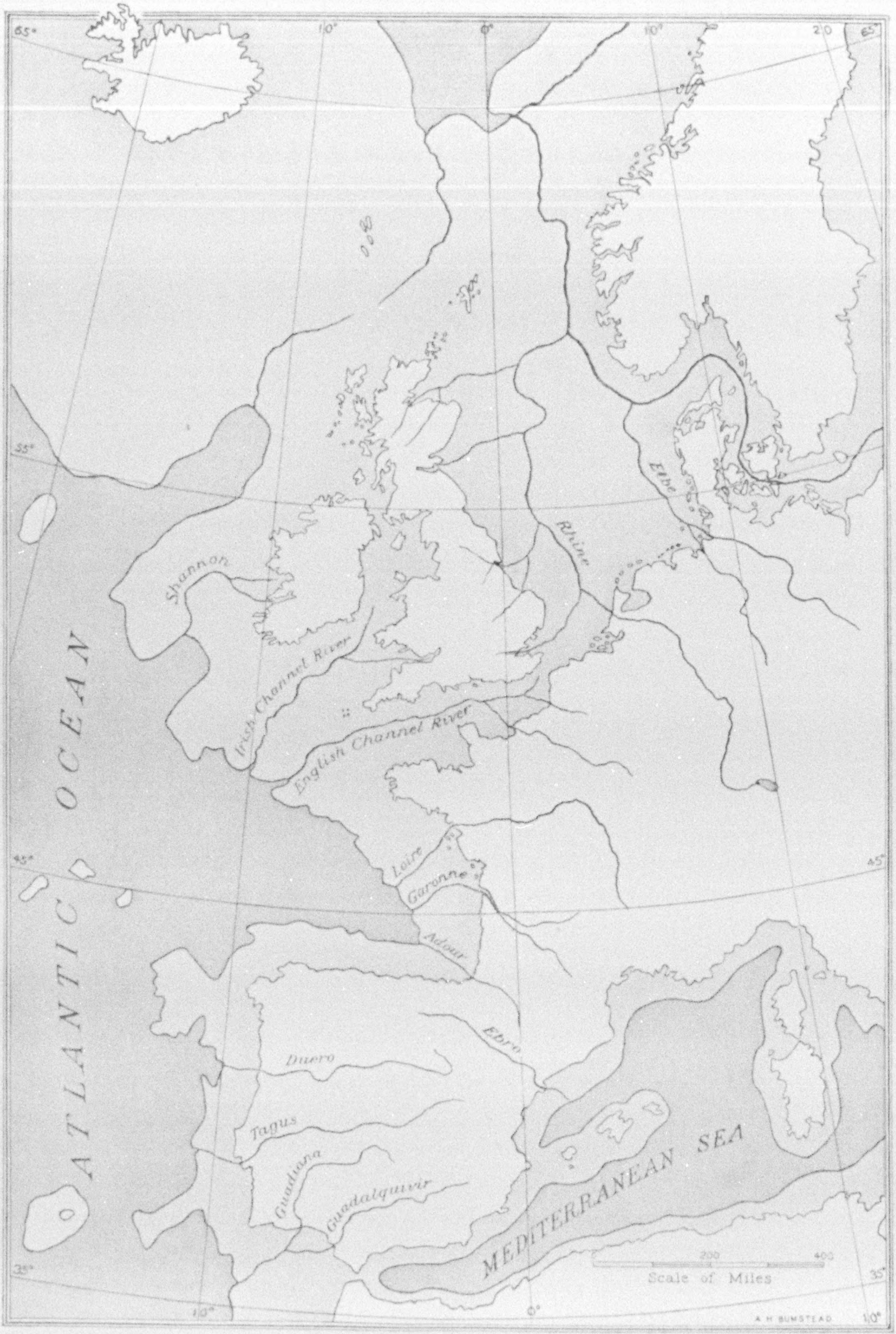
for either beasts or men. Both the human and the brute inhabitants migrated thither in great waves from Asia and from Africa, in the latter case it being probable that the source of the,migratory wave was also in Asia, north Africa being merely the route of passage for the majority of the forms.

Very few mammalian forms trace their origin to Europe in the sense that others, such as horses, camels, anthropoid apes, hippopotamuses, ant-eaters, elephants, kangaroos, trace their several origins to North America, Asia, Africa, South America, and Australia. But a number of the phylæ received their special development in Europe, and this has been notably the case with certain forms of man.

The view held by some writers, that northern (including especially northwestern and north central) Europe was the special center of dispersal for vigorous and dominant life types which overran the world, is without foundation in fact. Again and again within comparatively recent geologic times northern Europe has been almost denuded of life. Only for short periods has it been a center of dispersal, and even during these periods it has merely dispersed types, perhaps developed types, of creatures which in the normal course of events it has been receiving as dominant migrants and invaders from other regions.

This is as true of the "Nordic Man" who overran southern Europe fifteen hundred years ago as of his mixed-blood successors who during the last five centuries have on a larger scale overrun most of the earth, and of the parasitic companions of these mixed-blood successors, such as the rat, the rabbit, the house sparrow, and various weeds.

The great cultures and great cultive races of Europe in prehistoric times came from elsewhere, doubtless Asia. The men who used metals, who owned flocks and herds, and who grew crops—that is, the men out of whom it was possible to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Guadalquivir
MEDITERRANEAN SEA
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Scale of Miles
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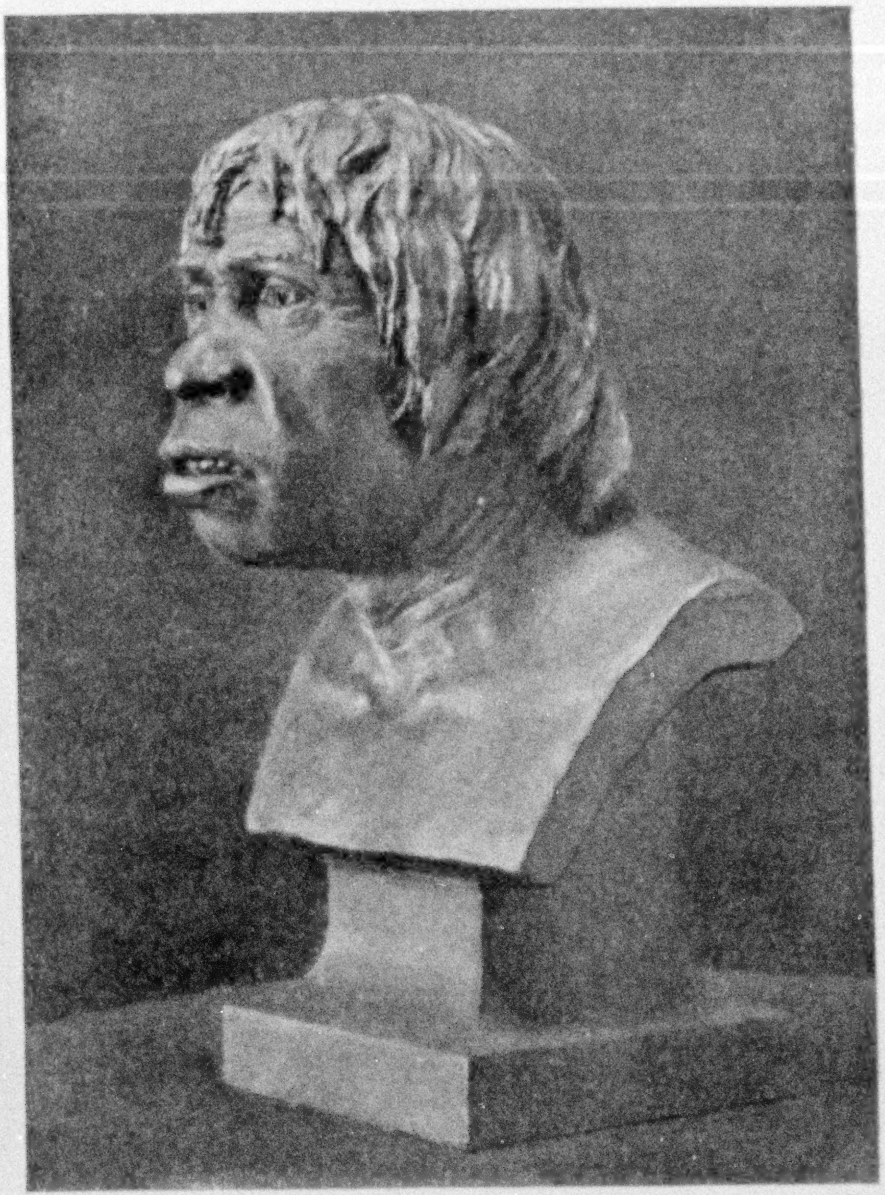
0°
A. H. BUMSTEAD
10°

WESTERN EUROPE DURING THE THIRD INTER-GLACIAL STAGE

In which Africa, the British Isles, and Iceland were connected with the mainland and the river channels were much extended. During this period the Piltdown man (see page 119) was living in England and France.

develop modern civilization—were all immigrants in Europe, who had originated and started upward elsewhere.



Photograph from Osborn's "Men of The Old Stone Age"

A HEAD RECONSTRUCTED ON THE PILTDOWN SKULL, FOUND IN SUSSEX, ENGLAND: EOANTHROPUS DAWSONI

The race is believed to have lived in England and France 100,000 to 300,000 years ago (see page 123)

THE ONLY RECORDS OF EARLY MAN YET DISCOVERED ARE IN EUROPE

But while we could doubtless learn far more of the paleo-history and prehistory of man if we knew what had happened to him in Asia during the two or three hundred thousand years before history dawned in Mesopotamia and on the Nile, we do not, as a matter of fact, possess such knowledge. The records are European, as already said, and necessarily in our studies we must deal chiefly with Europe.

The climatic changes in both temperature and moisture produced extraordinary oscillations in the giant mammalian fauna of the time.

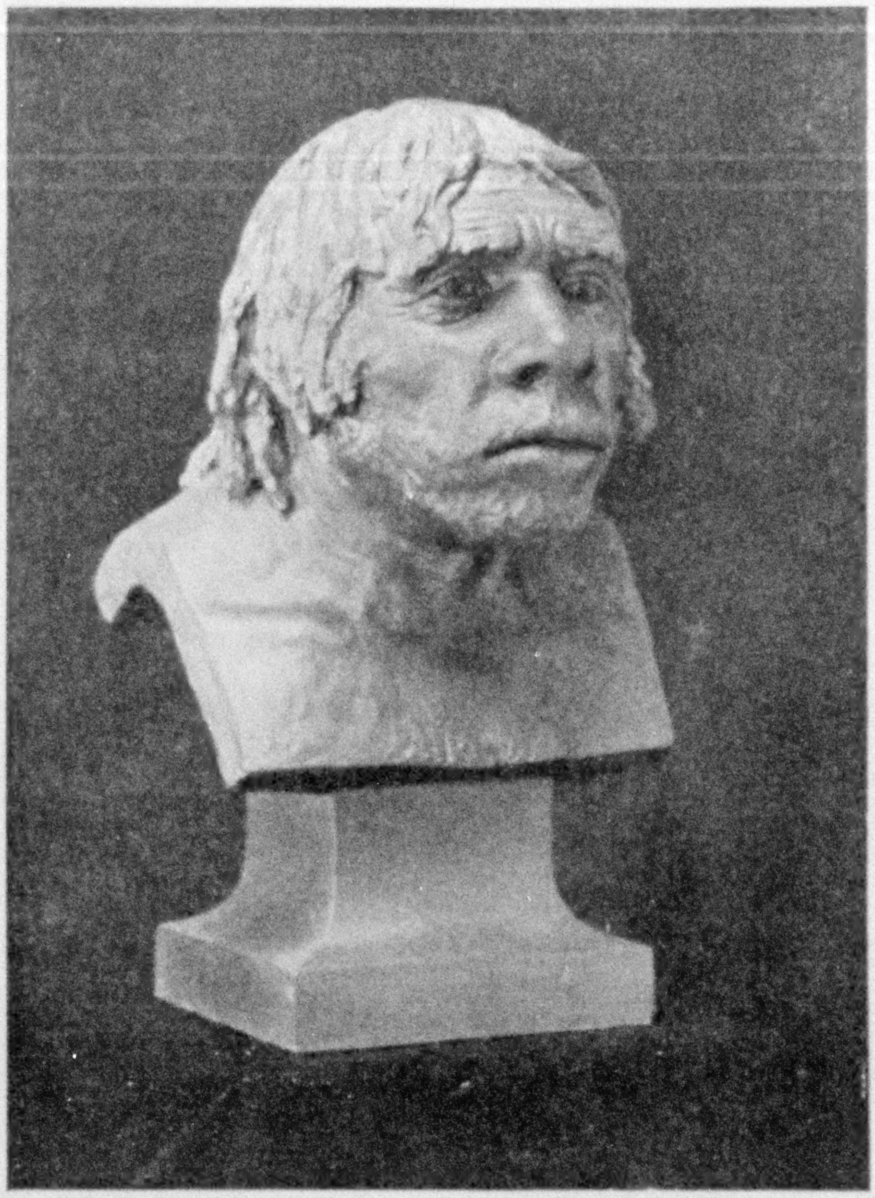
At the close of Pliocene times Europe possessed a warmer climate than at present, and in the forests flourished many trees now only known in America—the sequoia, sabal, sassafras, locust, sweet-gum, and tulip tree. There is no evidence that any ancestor of man then existed in Europe; but elephants, rhinoceroses, hippopotami, saber-tooth tigers, wild oxen, and horses abounded.

The period of glaciation which ushered in the Pleistocene drove these animals southward, or into restricted areas in middle Europe, and brought in many northern forms, such as the musk-ox. In the long succeeding period of mild climate elephants and hippopotamus lived beside or near by moose and lions and Irish elk, and the saber-tooth was the chief beast of prey (see page 117).

Then came the second and severest period of glaciation. During the mild inter-Glacial period which followed new species of elephants and rhinos appeared, and also the lion and hyena, together with various species of horses, deer, and cattle. Most important of all, the Heidelberg man appeared — the earliest true man, clearly human, but, equally clearly, closer kin to his remote anthropoid kinfolk than is any existing savage.

Again the glaciers advanced, and the mammoth and woolly rhinos (see page 116) appeared, but disappeared as the third inter-Glacial period of mild climate set in. During this third period primitive types of men existed side by side with the great southern faunas.

Once more the ice closed down; mammoth, woolly rhinoceros, musk-ox, and reindeer advanced southward from the



Photograph from Osborn's "Men of The Old Stone Age"

THE NEANDERTHAL MAN, A RACE WHICH LIVED IN CAVES OF CENTRAL FRANCE 50,000 YEARS AGO (SEE PAGES 123-125)

Modeled on skull from cave of La-Chapelle-aux-Saints: Corrèze, France

Arctic tundra, and sometimes mingled with lion and aurochs, horse and giant deer; and the low-browed, almost chinless human hunters of the period dwelt in grottos or at the mouths of caverns, the possession of which they disputed with the cave bear, cave lion, and cave hyena.

As this ice age passed there came a period of cold, dry climate, and with it an invasion of animal life from the eastern steppes—the kiang, the saiga, the jerboa, and the steppe horse. Then by degrees the climatic and geographical conditions changed to those that still obtain—the beasts of the steppes retreated eastward and those of the tundra northward, and the giant forms vanished from the earth.

THE APE-MAN OF JAVA

It is the people who were the companions of these successive faunas whom Mr. Osborn describes. He begins by a brief summary of the probable ancestral tree of man in his prehuman days, showing that his stem probably branched off from that of the anthropoid apes at the beginning of the Miocene, having split from the monkey stem at or before the beginning of the Oligocene. Then he discusses the famous ape-man of Java, the pithecanthropus, the prehuman creature — probably, however, only collaterally in our line of ancestry—who appeared at the dawn of the Pleistocene (see picture, p. 112).

This being was already half way upward from the beast, half way between true man and those Miocene ancestors of his, who were still on the psychic and intellectual level of their diverging kinsfolk, the anthropoid apes. He, or some creature like him, was in our own line of ascent during these uncounted ages when our ancestors were already different from all other brutes and yet had not grown to be really men. He probably used a club or stone at need; and about this time he may have begun very rudely to chip or otherwise fashion stones to his use.

His progress was very, very slow; the marked feature in the progress of man has been its great acceleration of rapidity in each successive stage, accompanied continually by an inexplicable halt or dying out in race after race and culture after culture.

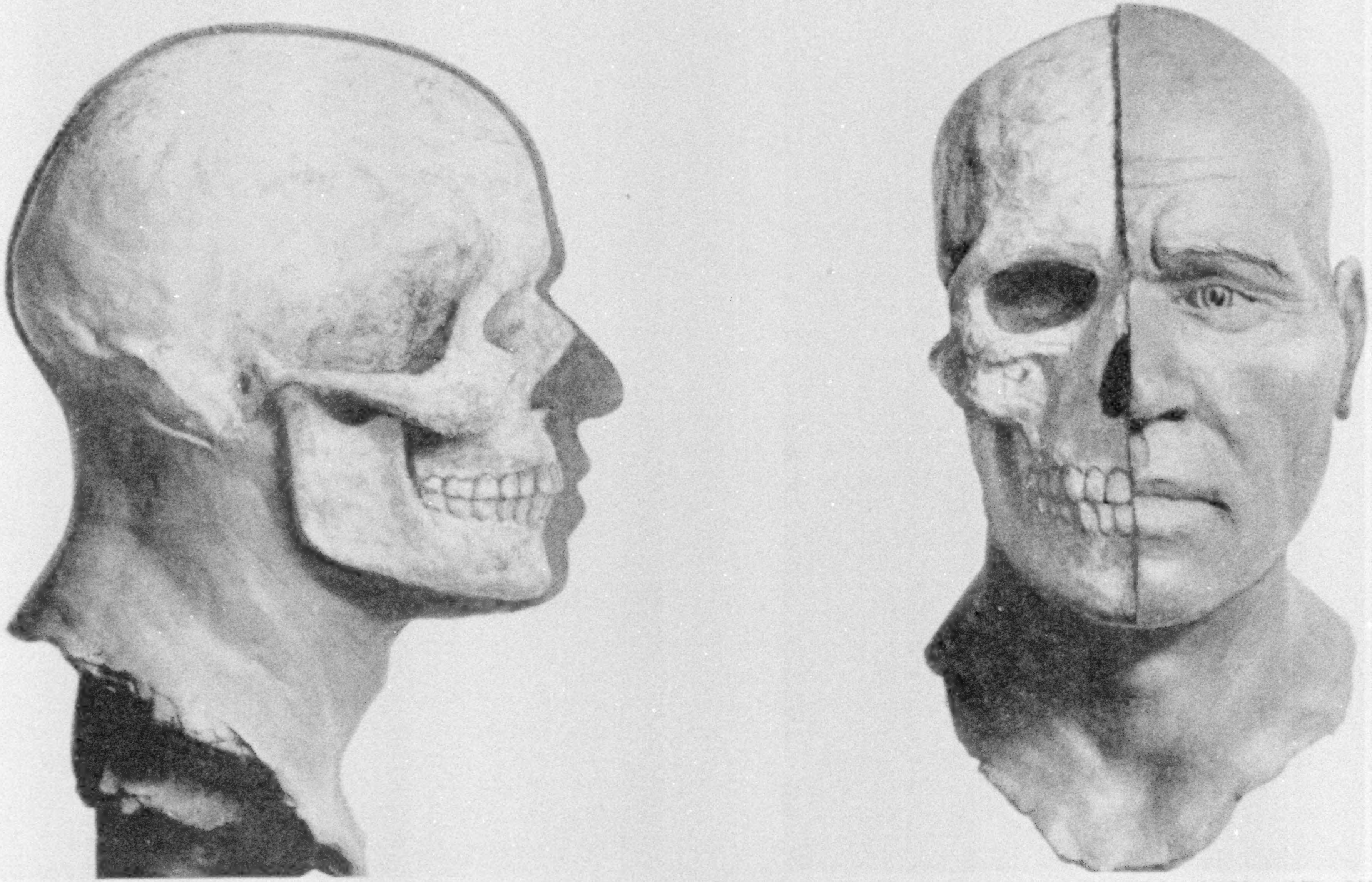
250,000 YEARS LATER—THE HEIDELBERG MAN

After the ape-man of Java we skip a quarter of a million years or so—according to Mr. Osborn's conservative figur-

Photograph from American Museum of Natural History

IN THE CAVES OF THESE AND SIMILAR CLIFFS IN CENTRAL FRANCE THE NEANDERTHAL RACE OF MEN LIVED FOR 50,000 YEARS: VALLEY OF THE VÉZÈRE, FRANCE (SEE PAGE 125)

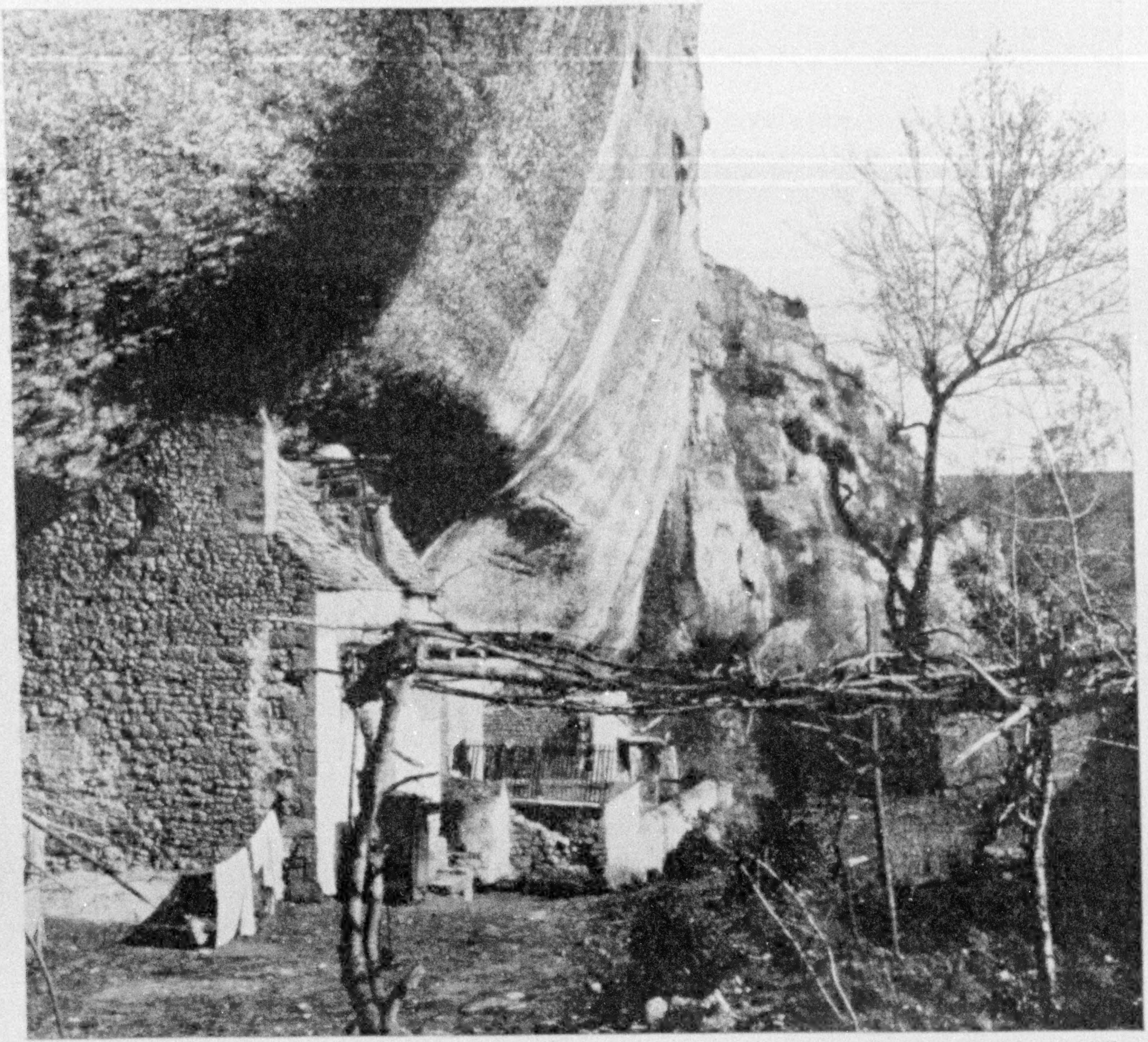
XUM



Photographs from Osborn's "Men of The Old Stone Age"

HEAD OF THE "OLD MAN OF CRÔ-MAGNON"

Rejuvenated by the restoration of the teeth, showing the method of restoration of the features adopted in all the models by J. H. McGregor. The diameter of the head across the cheek bones is seen to be greater than that across the cranium. "The most profound change in the whole racial (not cultural) history of western Europe was the sudden and total supplanting of these savages, lower than any existing human type, by the tall, finely built Crô-Magnon race of hunters, who in intelligence evidently ranked high as compared with all but the very foremost modern peoples, and who belonged to the same species of man that we do—*Homo sapiens*" (see text, page 125).



Photograph from Osborn's "Men of The Old Stone Age"

UNDER THE SHELTER OF THESE ROCKS WAS FOUND A SKELETON OF THE CRÔ-MAGNON RACE OF HUNTER-ARTISTS WHO ENTERED EUROPE 13,000 YEARS AGO

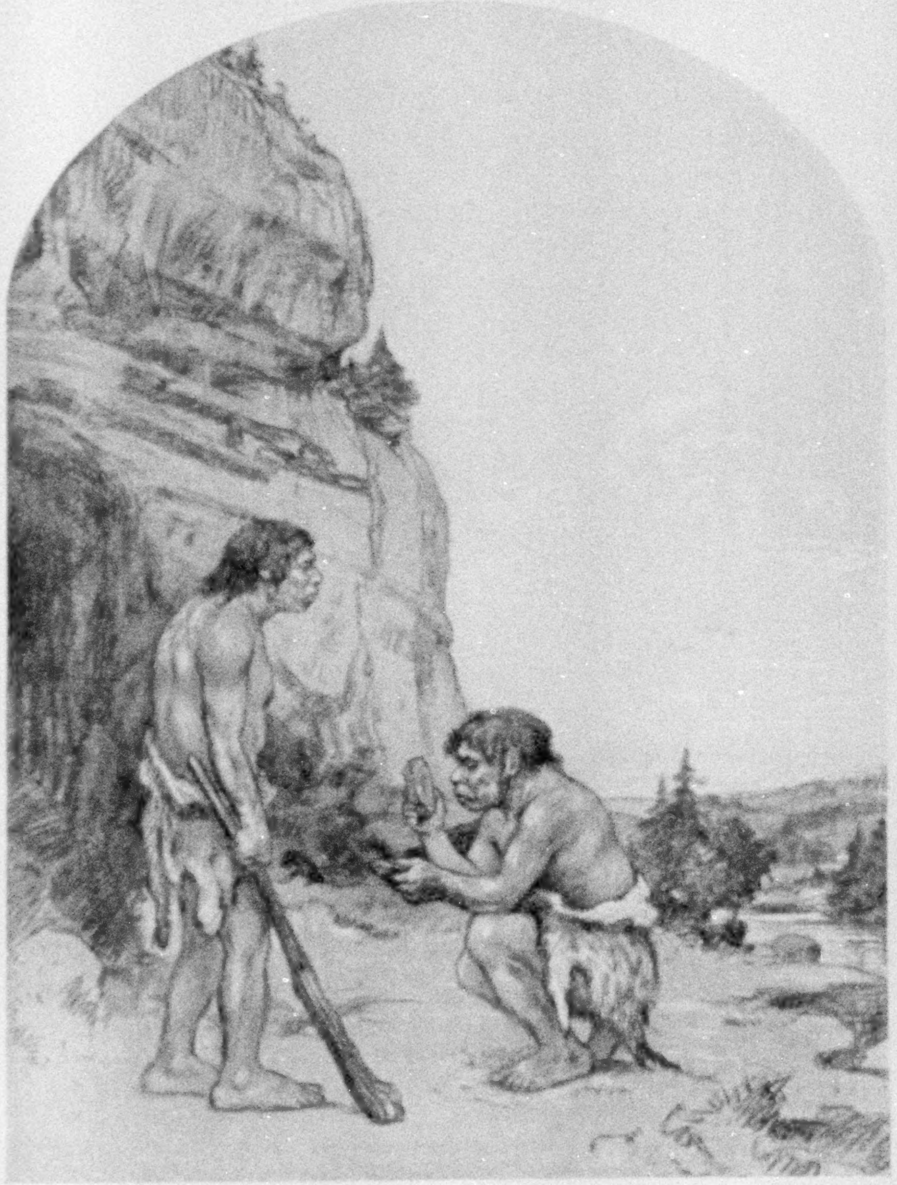
ing—before we get our next glimpse of a near-human predecessor of ours. This is the Heidelberg man, who lived in the warm second interglacial period referred to above, surrounded by a fauna of huge or fearsome beasts, which included the saber-tooth and the hippopotamus, and also rhinoceroses and elephants of southern type.

He was a chinless being, whose jaw was still so primitive that it must have made his speech imperfect; and he was so much lower than any existing savage as to be at least specifically distinct—that is, he can be called "human" only if the word is used with a certain largeness.

Again we make a long skip—this time of somewhat over a hundred thousand years—and come to the Piltdown man, or near-man—a being seemingly little farther advanced than the man of Heidelberg, and in some ways less so, for he possessed apelike canine teeth. As regards all of these very early near-human remains, there is room for considerable difference of opinion not only as to their exact relationships and their standing on the man-phylum, but as to their age, both absolutely, and relatively to other human remains and to the remains of the great Pleistocene faunas (see picture, p. 119).

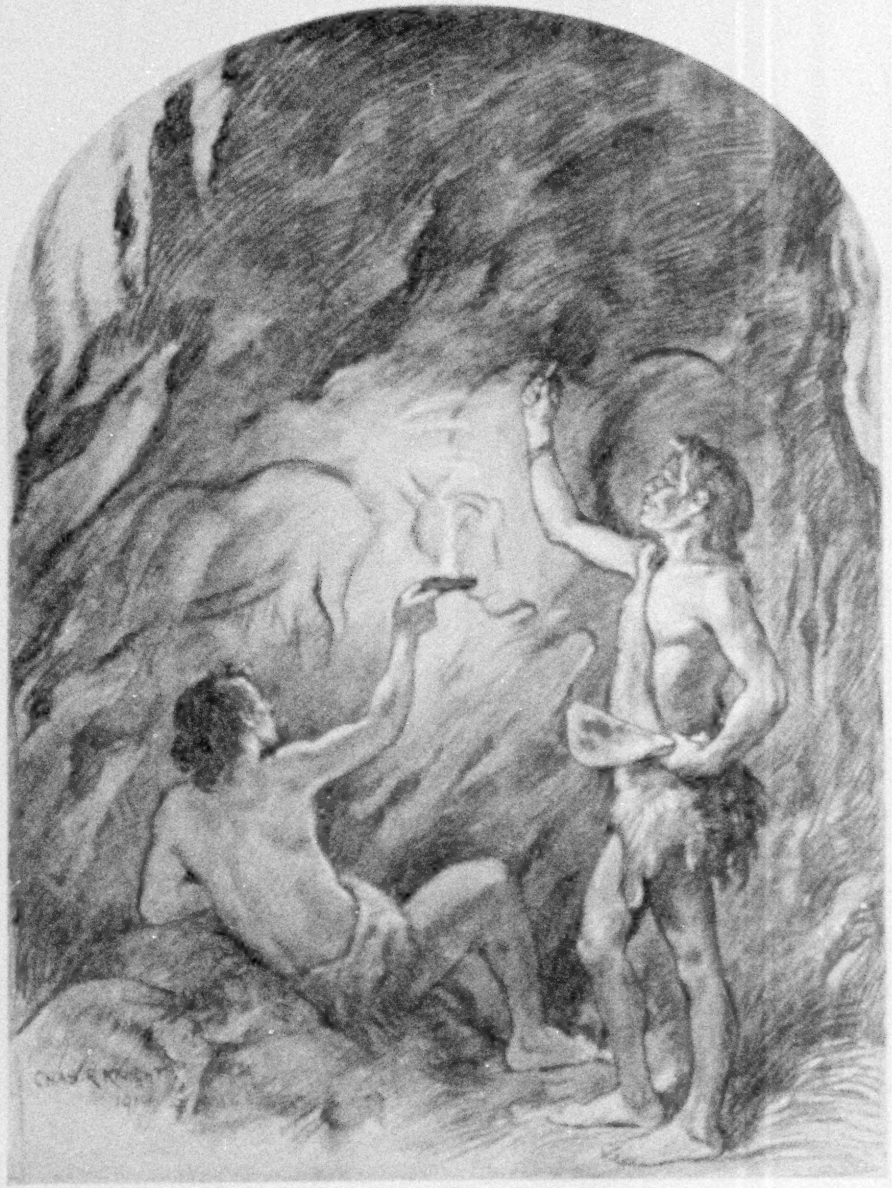
A RACE THAT WAS CONTENT TO LIVE IN CAVES FOR FIFTY THOUSAND YEARS

The next race was that of the Neanderthal men, much more modern and



AN ILLUSTRATION OF THE MAN OF 50,000 YEARS AGO

"These Neanderthal men were squat, burly, big-headed, thick-skulled savages, with brows projecting over cavernous eyes, knees permanently bent, and jaws almost chinless. Their brains were of good size, but the portions which represent the higher intellectual attainments were poorly developed" (see text, page 125).



Photographs from Osborn's "Men of The Old Stone Age"

CRÔ-MAGNON MAN IN THE CAVERN OF FONT-DE-GAUME, DORDOGNE, RESTORED IN THE ACT OF DRAWING THE OUTLINES OF ONE OF THE BISONS ON THE WALL more advanced, but lower than any existing savage, and specifically distinct from modern man. This race dwelt in Europe, without other human rivals, for an immense period of time; probably at least fifty thousand years; certainly an age several times as long as the period included in the interval between the earliest polished stone men and ourselves—in other words, several times as long as the ages of polished stone, bronze, and iron and the total of historic times all put together (see picture, page 120).

These Neanderthal men were squat, burly, big-headed, thick-skulled savages, with brows projecting over cavernous eyes, knees permanently bent, and jaws almost chinless. Their brains were of good size, but the portions which represent the higher intellectual attainments were poorly developed.

The type skull of the race was discovered sixty years ago; but its wide divergence from existing type, combined with its large brain capacity, caused students to doubt its exact place in the human scale. Darwin practically ignored it, although it was exactly the "missing link" he hoped to find. The perverse ingenuity of the great anatomist Virchow, who, with wrong-headed insistence, declared its peculiarities to be pathologic, delayed for a generation the full understanding of its importance.

Other skulls and skeletons were found, however, and there is now no more doubt of the racial existence of the Neanderthals than of the racial existence of the ancient Egyptians. They were a low race of men, distinctly human, but far nearer the beast than any existing race. They were widely distributed, began to live in caves when the Glacial epoch really opened, and assiduously practiced the industry of making tools, implements, and weapons of flint.

They lived by the chase of the great game with which they were surrounded. Some of their favorite hunting grounds were frequented by them for untold generations, and the skeletal remains of thousands of bison and reindeer and tens of thousands of wild horses, mingled with the bones of mammoth and rhinoceros, show how the game abounded. *Some of their favorite caverns were lived in by them and by their successors for fifty thousand years.*

They were widely, although thinly, spread over Europe, and the development of their flint tools and implements is everywhere so uniform as to show that the various stages in the evolution of their culture in different places were essentially contemporary. During the immense period of time when they were the only human beings in Europe the climate changed from warm-temperate to glacial, and the fauna changed in like fashion, one set of beasts supplanting another. They hunted all these creatures, but especially the horses, oxen, and reindeer.

Yet how small a factor man then was as regards the extermination of the big game may be gathered from the fact that the changes in the faunas were evidently due purely to climatic alterations. When the climate changed, so as to favor the mammoth, woolly rhinoceros, musk-ox, reindeer, and steppe horse, they all swarmed into the land, where hitherto they had not been found, and flourished and increased greatly. It is evident that the presence of the Neanderthal hunter had no effect upon them. He could not even prevent their increase when climatic conditions favored such increase.

OUR ANCESTORS, A RACE OF TALL HUNTER-ARTISTS, ENTER EUROPE

At last the life term of these primitive hunter folk drew to a close. They were not our ancestors. With our present knowledge, it seems probable that they were exterminated as completely from Europe as in our own day the Tasmanians were exterminated from Tasmania.

The most profound change in the whole racial (not cultural) history of western Europe was the sudden and total supplanting of these savages, lower than any existing human type, by the tall, finely built Crô-Magnon race of hunters, who in intelligence evidently ranked high as compared with all but the very foremost modern peoples, and who belonged to the same species of man that we do—*Homo sapiens* (see picture, page 122).

Geologically, these were modern immigrants into western Europe; for there is reasonably good ground to believe that they entered that region only twenty-five or thirty thousand years ago. They possessed really noteworthy artistic ability, and their carvings, drawings, and paintings of the mammoth, bison, aurochs, rhinoceros, horse, reindeer, cave bear, and cave lion are of high merit.

THE WHITE MAN HAS NOT BEEN AN IMPORTANT ELEMENT IN HISTORY FOR MUCH MORE THAN 3,000 YEARS

One or more Asiatic races reached central Europe somewhere about this time and may have influenced their culture. For a time there was another race associated with them in southern Europe, and, very curiously, this was a race akin to the negro pygmies of present-day Africa.

But these small negroids soon vanished, and the tall hunter-artists remained the sole masters of western Europe for what, judged by all historic standards, was an immense period of time—perhaps ten thousand years—certainly much longer than the period which covers the entire known history of the white race which now dominates the world—for the European white man has not been a ponderable element in civilization or history for much more than three thousand years.

Then the Cro-Magnons in their turn succumbed. There are indications that they had already begun to fall off somewhat, both physically and culturally, in accordance with that strange law which seems to apply to every social and political organism, just as it does to every individual, and which ordains that growth shall be followed by decay and death.

Be this as it may, this fine race disappeared, almost or quite completely, and in its place there came, seemingly from Asia, four or five different types of humanity, all of which can today be discerned in Europe's ethnically very mixed population.

The extreme difficulty of determining in prehistoric times the extent of correlation between racial invasion and cultural change and the effect upon one race of conquest or infiltration by another may be measured by comparing it with what we know of these matters in connection with the comparatively modern and historic case of the Normans.

These were Scandinavian sea-thieves, who conquered and settled in a province of France to which they gave their name, the name being merely the romance-speaking peoples' effort to pronounce Northmen, as both Norwegians and Danes were often called. In its early stages the conquest was precisely like those which other Norsemen made in England, Scotland, and Ireland. In these countries the invaders were ultimately assimilated with the original inhabitants and became Englishmen, Irishmen, and Scotchmen without producing any new racial type.

But the conquerors of the province in northwestern France so influenced and were so influenced by their surroundings, including especially the people they conquered, that an entirely new and extraordinary race sprang up—a race that for a century or two was, on the whole, the leading force in the development of western Europe. This race lost almost every particle of its Scandinavian culture—speech, religion, art, weapons, industry, law. It became completely French in all these matters, and doubtless mainly French even in blood.

But it produced a totally new and exceedingly able and formidable type of Frenchman. Normans conquered Sicily, England, and Ireland, putting rulers on the thrones of the two former, and established earldoms or principalities in places as far apart as Scotland and Syria. Everywhere they merged in the mass of the people whom they had conquered and dominated. Everywhere their advent produced a profound and lasting effect on the culture of the conquered people, and yet nowhere did they leave a trace of the culture of their own forefathers, and they left only a trace of their blood.

If we had not the written records we would be utterly unable to make a guess at the causes of the revolutions and totally new types of evolutionary development in civilization which they brought about. The merest glance at their history explains why we find so many prehistoric problems insoluble.

EUROPE DID NOT GIVE RISE TO A SINGLE SPECIES OF MAN

Mr. Osborn's conclusions are stated tentatively — that is, scientifically — as strong probabilities, not certainties. They are as follows, and they represent the conclusions which are in accord with our present knowledge.

From the earliest Paleolithic to Neolithic times western Europe was never a center of human evolution. It did not give rise to a single species of man, nor did there occur therein any marked evolution or transformation of human types. The main racial evolution took place to the eastward, whence at first primitive and afterward modern types of men found their way westward.

Of all the races of Paleolithic man which appeared in Europe, no one was ancestral to any other; they all successively arrived fully formed. Therefore the family trees or lines of descent of the races of the Old Stone Age consist of a number of entirely separate branches, which had been completely developed in the eastern mass of the great Eurasiatic continent.

The sudden appearance in Europe, some 25,000 years ago, of a human race with a high order of brain was not a local leap forward, but the result of a long process of evolution elsewhere. Throughout the whole period there was a long, slow process of checkered progress, marked by the rise and fall of races, of cultures, and of industries. It is a fascinating subject, and no one has dealt with it as ably as Mr. Osborn.

THE CRADLE OF CIVILIZATION

The Historic Lands Along the Euphrates and Tigris Rivers Where Briton Is Fighting Turk

By James Baikie

Author of "Sea Kings of Crete" and "The Resurrection of Ancient Egypt" in the National Geographic Magazine

IN THE southwestern corner of the great continent of Asia, between the Persian Gulf and the border of that great elbow known as Asia Minor, which the continent thrusts out westward, there lies a land whose influence upon the history of the human race it would scarcely be possible to overestimate.

This is the place which is generally recognized to have been the original home of the human race, where, in dim and misty ages before history began, men first attempted to form themselves into organized communities, where the Hebrew race found its origin, and whence their first leader, Abraham, went out in search of the land which he should afterward receive for an inheritance.

It is a long and comparatively narrow stretch of country, running up from the Persian Gulf toward the Taurus Mountains and that lofty tableland which we now know as Armenia. On its northern and northeastern side it is bordered by a fringe of mountains, gradually sloping up toward the great northern ranges. On the southern and southwestern side it fades away into the great Arabian desert (see map, page 216).

SOURCE OF MESOPOTAMIA'S FERTILITY

Far up in the tableland of Armenia, about 800 miles in a straight line from the gulf, rise two great rivers—the Tigris and the Euphrates. The former breaks through the mountain wall of the tableland on its eastern flank and flows in a southeasterly direction throughout almost its entire course.

The latter breaks through on the western flank and flows at first westward, as though making for the Mediterranean. It then turns south and flows directly southward for awhile; then sweeps around in a great bend to the southeast

XUM

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THE GARDEN OF EDEN

"The Garden of Eden is described in a way that leaves the actual situation which the writer was aiming to indicate very vague, but certainly it is in the neighborhood of the Euphrates, which is definitely named as one of the rivers which water it; and the word 'Eden' itself is the ordinary term for a plain in the Sumerian speech, the oldest language existing in this region. So that the Garden of Eden simply meant the Garden of the Plain, and the first forefathers of our race were believed to have had their home in this most fertile spot" (see page 132).

and follows a course gradually converging upon that of its sister stream. Finally, near the sea, the two unite and issue as one river into the Persian Gulf.

The land traversed by these two rivers has, like the sister river-land of Egypt, been from time immemorial one of the great historic centers of human development. It divides into two portions of fairly equal length. For the first 400 miles the country gradually descends in a gentle slope from the mountains, forming an irregular triangle between the two rivers, within which the land becomes less and less hilly, as it sinks southward, till, as it nears the Euphrates, it becomes a broad steppe, which, beyond the river, rolls off into the desert. This portion is strictly the land called by the Greeks "Mesopotamia."

THE GREAT ALLUVIAL PLAIN

The second division is totally different in character. It is simply a great delta, like that of the Nile—a flat, alluvial plain, which has been entirely formed of the silt brought down from the mountains by the two great rivers.

The process of land-making is still going on, and the waters of the Persian Gulf are being pushed back at the rate of about 72 feet per annum. What this slow process may achieve in many centuries is evidenced by the fact that we know that the ancient town of Eridu was still, at about 3000 B. C., an important seaport on the Persian Gulf. It is now 125 miles from the sea.

Both lands were entirely dependent for their habitability and fertility on the rivers which traversed them. In Mesopotamia the Tigris and the Euphrates have for long stretches channeled deep into the soil and flow below the level of the land. In the lower district—Babylonia—the ordinary level of the rivers is frequently above that of the surrounding plain; so that inundations are of frequent occurrence, and large tracts of the country are now unhealthy marshland.

In both cases, therefore, though for opposite reasons, the hand of man was needed to make the rivers helpful. In Mesopotamia the water was controlled by dikes and dams, which held it up until it was raised to the level of the land, over which it was then distributed by canals. In Babylonia the surplus water was drawn off directly by a great canal system, the banks of whose ancient arteries still stretch in formidable ridges across the plain.

FLOWING WITH MILK AND HONEY

Under the system of irrigation both lands were astonishingly fertile. Even today it can be seen that only well-directed work is needed to bring back the ancient fertility. After the spring rains the Mesopotamian slopes are clothed with rich verdure and are gay with flowers. But of old these lands were the wonder of the world for their richness.

Of Babylonia the Greek historian Herodotus wrote 2,350 years ago: "This territory is of all that we know the best by far for producing grain; as to trees, it does not even attempt to bear them, either fig or vine or olive; but for producing grain it is so good that it returns as much as two hundred fold for the average, and when it bears at its best, it produces three hundred fold."

You had, then, a land which, in constant human occupation and with constant and organized attention to the details of irrigation, was capable of almost anything; but at the same time it was a land which, left to itself, went back quickly to wilderness. The parching heat of summer withered everything on the Mesopotamian uplands; the low levels of Babylonia very speedily became marsh if the waters were not regulated.

So, the hand of man being withdrawn or checked, both Mesopotamia and Babylonia went back to the state in which they were originally and in which we see them now. They became great barren wastes, the Mesopotamian slopes clad in spring with a brief beauty, then parched and desolate for the rest of the season; the Babylonian plains covered with swamp and jungle, where fever and malaria breed continually.

DESOLATION SUCCEEDS LUXURIANCE

The desolation is only accentuated by the melancholy remains of human activity—canals choked and silted up till they have become fever beds instead of arteries; huge mounds of rubbish which once were great historic cities, towering up above the plain, shapeless and unsightly.

Before man came the land was waste. When he had learned to bridle its rivers and to develop its capabilities, it became "as the garden of the Lord." Now that he has lost the grip of his first inheritance it has gone back to waste again.

Yet there can be no doubt that here is a country of almost infinite possibilities, and that in the future, possibly not a very distant future, the first home of the race will again be one of the most fertile and perhaps one of the busiest spots in the world.

BIBLE WRITERS AS EYE-WITNESSES

There are few things more remarkable than the way in which this land which had once been supreme in the history of the world, and which for centuries was one of the great molding forces of human story, passed almost entirely out of the thought and memory of civilized man.

We know it, of course, from our Bibles. The name of Nineveh, "that great city," and the story of Nebuchadnezzar's pride, as he looked round upon palace and temple and tower, and said: "Is not this great Babylon, which I have built?" These things are part of our earliest and unforgettable impressions of history.

The men who wrote the history and the prophecy of the Old Testament did so when these lands were living and at the height of their glory. They witnessed Assyria trampling down the nations and gathering their treasure "as one gathereth eggs that are forsaken," and they saw her fall, exulting over the overthrow of Nineveh, whose cruelty had passed upon all nations. They saw the second rise of Babylon under Nebuchadnezzar, and lived in the midst of its splendors and beheld them all pass away.

"THEN CAME MIDNIGHT"

Then came down midnight. So utterly had the local habitation and the name of these great cities vanished from the memory of man that 400 years before Christ, when Xenophon and the Ten Thousand marched through the land after the battle of Cunaxa, they passed the ruins of Nineveh and never knew of them, and encamped beside the ruins of Kalah, another of the mighty cities of Assyria, and spoke of them as "an ancient city named Larissa."

Wonderful stories and legends, of course, still found their place in the minds of men about these ancient cities and monarchies—legends of Nimrod, of Ninus and Semiramis, and of the wonderful palaces and hanging gardens of Babylon. But where these cities stood and what had become of their glories, these were things utterly forgotten for close on 2,000 years.

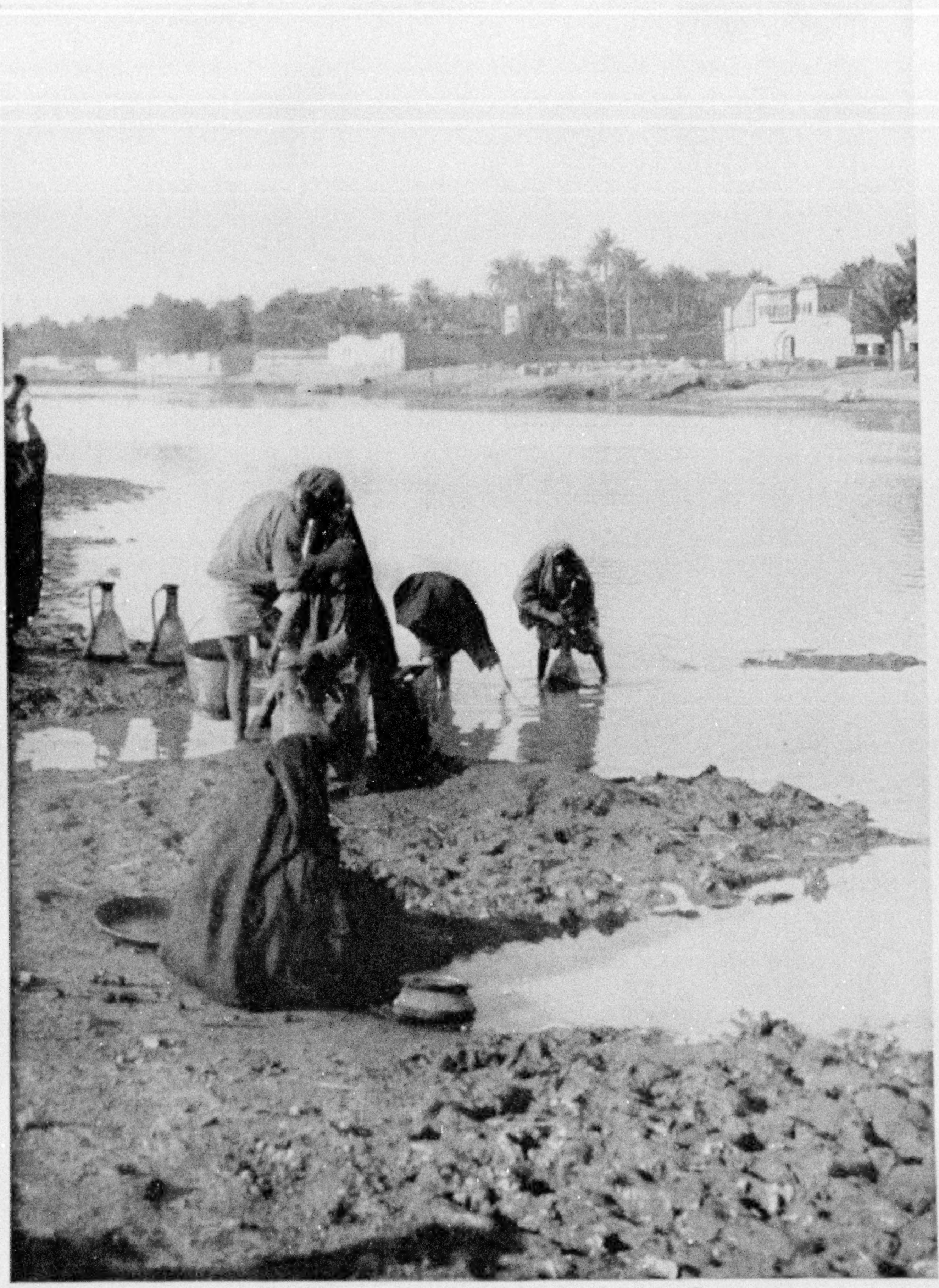
"Babylon," said Isaiah, long before (Isaiah xiii: 19-22), "the glory of kingdoms, the beauty of the Chaldee's excellency, shall be as when God overthrew Sodom and Gomorrah. It shall never be inhabited, neither shall it be dwelt in from generation to generation, neither shall the Arabian pitch tent there. . . . But the wild beasts of the desert shall lie there, and their houses shall be full of doleful creatures; and owls shall dwell there, and satyrs shall dance there."

THE WORDS OF A PROPHET

And Zephaniah (ii: 14) writes thus of the sister city, whose fall was earlier: "He will make Nineveh a desolation, and dry like the wilderness. The cormorant and the bittern shall lodge in the upper lintels of it. . . . This is the rejoicing city that dwelt carelessly, that said in her heart, I am, and there is none beside me; how is she become a desolation, a place for beasts to lie down in; every one that passeth by her shall hiss and wag his hand."

Layard thus describes the emotions excited by the first contemplation of the desolate heaps which now represent the cities of Mesopotamia. After speaking of "the stern shapeless mound rising like a hill from the scorched plain, the fragments of pottery, and the stupendous mass of brickwork occasionally laid bare by the winter rains," he goes on:

"He is now at a loss to give any form to the rude heaps on which he is gazing. Those of whose works they are the remains, unlike the Roman and the Greek, have left no visible traces of their civilization or their arts; their influence has long since passed away. The scene around is worthy of the ruin he is con-



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A PICTURESQUE SCENE ON THE EUPHRATES BELOW BABYLON

Babylonia is a great delta like that of the Nile—a flat alluvial plain which has been entirely formed by the silt brought down by the great Tigris and Euphrates rivers. The process of land-making is still going on, and the waters of the Persian Gulf are being pushed back at the rate of about 72 feet per annum. What this slow process may achieve in many centuries is evidenced by the fact that we know that the ancient town of Eridu was still, at about 3000 B. C., an important seaport on the Persian Gulf. It is now 125 miles from the sea (see page 129).

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templating; desolation meets desolation; a feeling of awe succeeds to wonder; for there is nothing to relieve the mind, to lead to hope, or to tell of what has gone by. These huge mounds of Assyria made a deeper impression upon me, gave rise to more serious thoughts and more earnest reflection than the temples of Baalbec, and the theaters of Ionia."

DARKNESS OF CENTURIES BROKEN

The darkness of centuries has since been broken, and broken mainly, in the first instance, by the man who wrote these sentences. Let us therefore seek to outline what we have gradually come to know of the earliest story of the human race in these lands, which seems, as far as can be judged, to be possibly the earliest story of the human race in the world—that is to say, as civilized and organized beings.

Scripture, of course, places the first beginnings of human story in this land. The Garden of Eden is described in a way that leaves the actual situation which the writer was aiming to indicate very vague; but certainly it is in the neighborhood of the Euphrates, which is definitely named as one of the rivers which water it; and the word "Eden" itself is the ordinary term for a plain in the Sumerian speech, the oldest language existing in this region.

THE GARDEN OF THE PLAIN

So the Garden of Eden simply meant the Garden of the Plain, and the first forefathers of our race were believed to have had their home in this most fertile spot. The story of the Deluge moves in the same region, and the Babylonian records preserve a tradition which corresponds almost detail for detail with that of Noah and the Ark.

In Genesis xi we have the Hebrew tradition of the beginnings of organized civilization, with the rise of the first city, and the origin of the strifes and jealousies which have separated the various nations from one another. It is, of course, poetically described, but the place where these beginnings occurred and the methods adopted by these earliest organizers of the race are stated with perfect clearness, and they correspond exactly with the conditions existing in Babylonia.

"It came to pass, as they journeyed from the east, that they found a plain in the land of Shinar; and they dwelt there. And they said one to another, 'Go to, let us make brick, and burn them thoroughly.' And they had brick for stone, and slime had they for mortar. And they said, 'Go to, let us build a city and a tower whose top may reach unto heaven; and let us make us a name, lest we be scattered abroad upon the face of the whole earth.'"

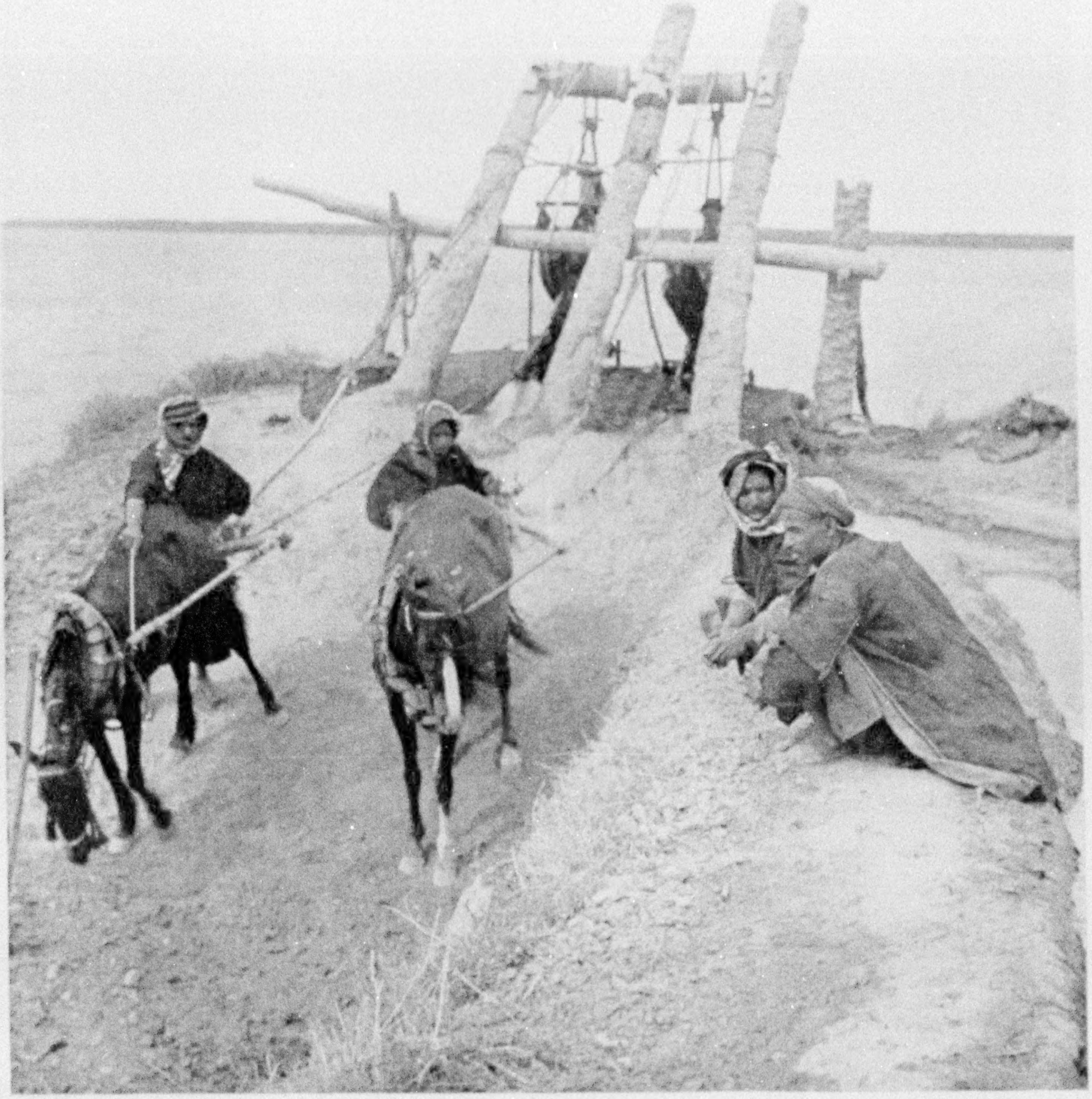
Here we have the terse and vivid statement of what must necessarily have happened when men first began to realize their powers and to organize themselves in such a land. The writer of Genesis puts in two sentences, as if it were a single act, what no doubt, in actual fact, took hundreds or perhaps thousands of years to attain.

But there and in that fashion there is no doubt that cities took their rise and civilization began to develop. The fertile plain invited habitation. Men felt the need of gathering for mutual protection against their human enemies or the wild beasts which abounded; and when they cast about as to how to build they found themselves faced by the fact that Babylonia produces no building stone.

Their buildings had to be reared of the mud of which their land was composed; and, from the dawn of history to its close, buildings in Babylonia were of brick, huge masses of crude sun-dried mud, cased on the outside only with the harder kiln-burned bricks.

A CITY FOR PROTECTION AND A TOWER FOR WORSHIP

"A city and a tower," says the writer, and again he is true to the facts. The city for protection and the tower for worship. For the characteristic feature of Babylonian temple architecture, distinguishing it sharply from the Egyptian temples, with their succession of chambers on the ground level, is the "Ziggurat," or temple tower, rising in successive stages, each stage a little less in area than the one beneath it, until the shrine on the summit is reached.



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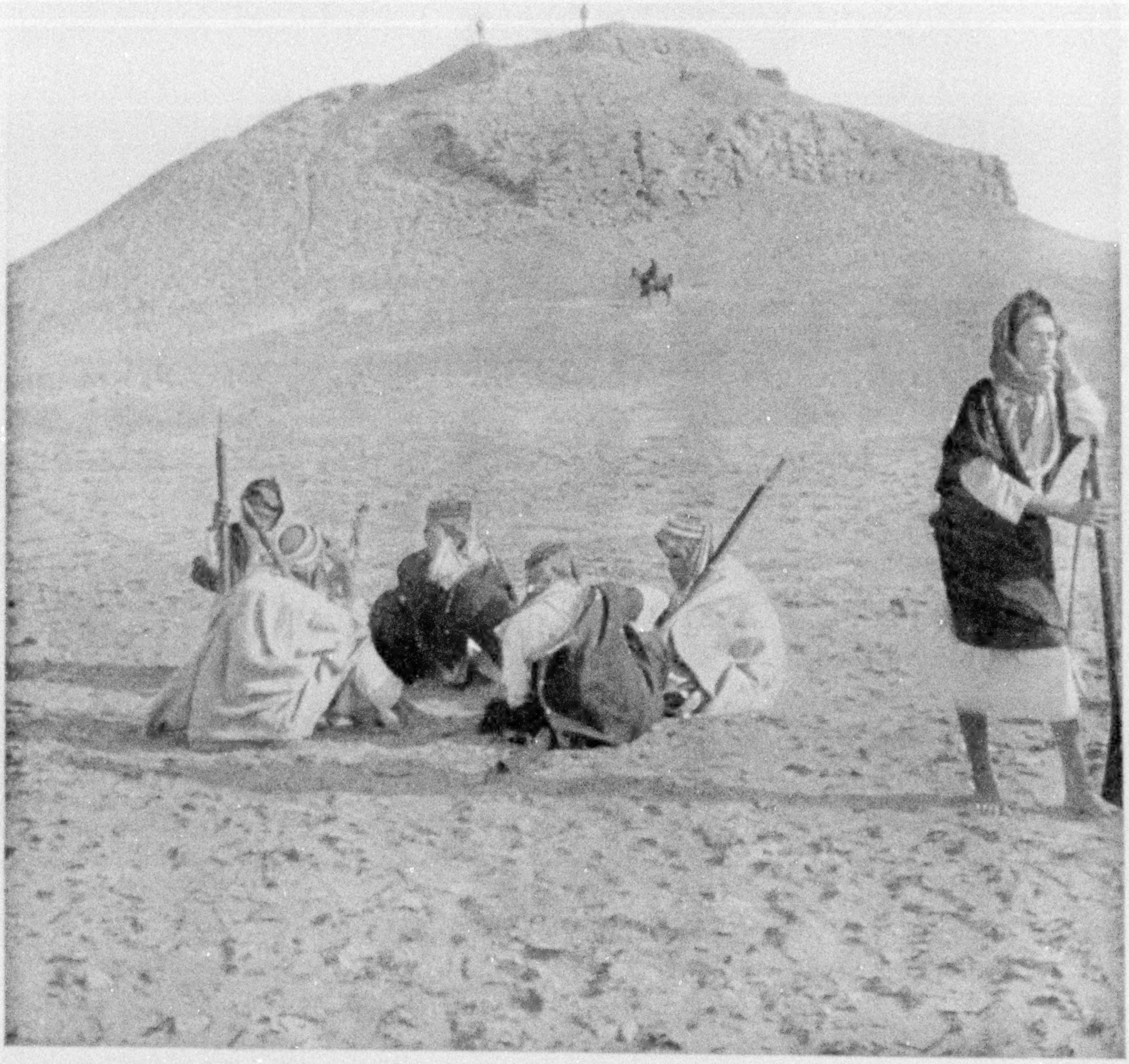
IRRIGATION ON THE EUPHRATES, WHERE MEN HAVE TOILED SINCE ADAM LEFT EDEN

The science of irrigation was developed on the banks of this river many thousands of years ago. Babylonia was then one vast network of canals. Around the whole country spread a Chinese wall inverted, a great moat, water-filled, at once to keep out the alien stranger and to fill up the network of canals. At the same time these larger canals furnished natural highways of commerce, and thousands of boats plied their waters. One of them left the Euphrates from the right bank near Hit and skirted the plain all the way to the Persian Gulf. The work was so well done that even the debris of thirty centuries has not been able to obliterate it. No one can say how long ago it was built, but we do know that it was ancient in the days of Nebuchadnezzar—so ancient that he "pointed with pride" to the fact that he had cleaned it out once more and restored it. Not a hundredth part of what is still left visible of the ruined irrigation works is in use today. Where once as fine crops as ever grew flourished in luxuriance, there is desert and marsh and the silent mounds of entombed cities.



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THE MOUND COVERING THE REMAINS OF UR OF THE CHALDEES

Ur of the Chaldees is best known as the place out of which came the patriarch Abraham. When we first meet the Babylonians, some four thousand years before Christ, they were already a civilized, metal-using people, living in great cities, possessed of a complicated system of writing, and governed under firmly established civil and religious dynasties and hierarchies (see page 135).

When, then, did this first gathering of human beings into organized communities take place, and what was the race which took this momentous step? As to the question of when, we are hopelessly ignorant. Berosus, the old historian of Babylonia, tells us of kings before the Deluge who reigned for incredible periods — 36,000 years in one instance — while some of his kings after the Deluge come down to comparatively modest spans, such as 2,400 and 2,700 years. It is easy to ridicule such wild fancies, but not so easy to put facts in their place.

Pretty much all that can be said is that somewhere about 4000 B. C. we do seem to get into touch with actual and unmistakable historic facts. That date is at least 1,500 years before the date at which Abraham is believed to have gone forth from the land in search of his inheritance.

But the pioneers had been at work long

before that; for the people whom we meet at 4000 B. C. are already a highly civilized and organized race. Already they had towns of considerable size and importance, each with its own great temple tower rising high above the houses and dedicated to the town god.

LIFE 6,000 YEARS AGO

They had a system of government whose unit was not the kingdom, but the city-state—the city, that is, with as much territory around it as it could conveniently lay hands on and protect from its nearest neighbor, the adjoining city.

At the head of each community was an official who called himself, in his inscriptions, the "patesi," of his own particular state, and who seems to have been, like Melchizedek, a combination of priest and king.

The inhabitants of the city were skilled in various trades and professions; their social fabric was already sharply divided into a considerable variety of classes; and their pottery and the fragments of their sculpture which have survived show us that they were by no means unskilled in the fine arts.

Most important of all, they had already evolved a very complete and highly developed system of writing, which in itself must have taken centuries to reach the stage at which it is first found. It began, no doubt, with pure picture-writing, as the Egyptian hieroglyphic system began; but while the Egyptians maintained the pictorial element of their system to the end, developing alongside of it the hieratic and demotic systems of writing for ordinary purposes, the race in question had already, when we first meet with their writing, got away from any trace of the picture stage. Their writing is already the arrow-headed or cuneiform script which persisted right down to the fall of the great empires of the ancient East (see article by Professor Clay in this number).

WHENCE CAME THE SUMERIANS

The wonderful people who had accomplished all this we call now by the name of Sumerians, from their own name for one of the divisions of their land. Whence they came is unknown.

It has been suggested that they drifted across the mountains from India, and, after settling for awhile in Persia, finally found their resting-place in the Babylonian plain; and that the form which they gave their temples, towering up like mountains into the sky, may have been due to a remembrance of early days among the hills of India and Persia; but that is scarcely more than guesswork.

In fact, we only see this people through the mists for a short time at the very beginning of things, and then they disappear, driven out of their land, or brought into subjection by a stronger and more warlike race—that Semitic people from whom Abraham and the Hebrews sprang

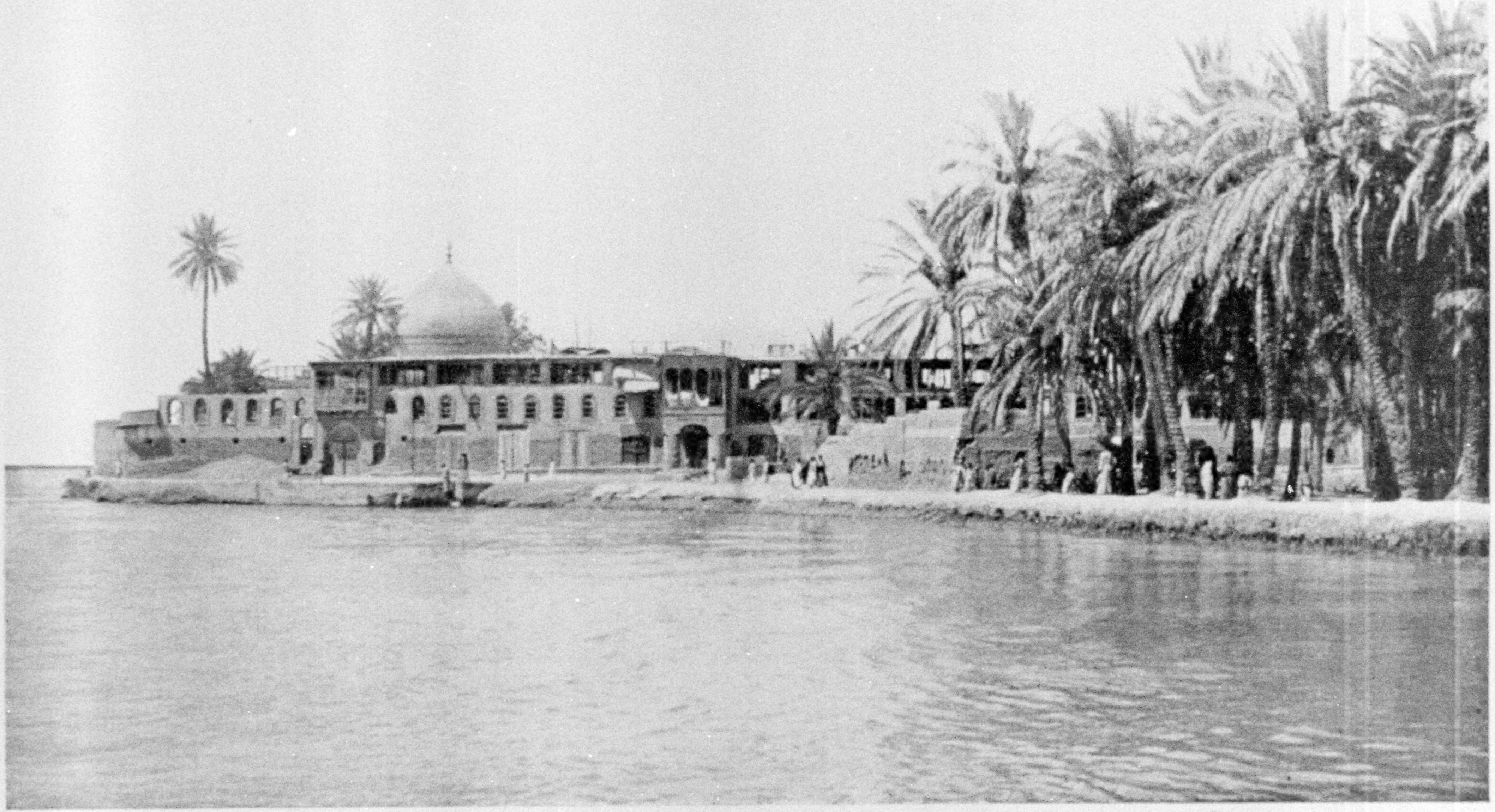
You are to imagine the land, then, as dotted all over at pretty frequent intervals with fairly important towns. Round each town rises a high wall of brick, very thick and strong, faced on the outside with the harder kiln-burnt bricks. In the center of the town rises the Ziggurat, or temple-tower. It may have any number of stages, from three to seven, according to the wealth of the town or the devoutness of its priest-king. Beside it is the palace of the latter, and under the shadow of these two great buildings crouch the smaller houses.

WANT OF STONE MAKES NARROW ROOMS

Even in the palace the rooms are long and narrow, for the want of stone and timber limits their breadth to the length of such roof-beams as can conveniently be procured; and although the Babylonians had already learned the principle of the arch, they did not vault their buildings save on a small scale.

In the town you would find business thoroughly well organized. Business documents were written in cuneiform script on clay tablets, and when they had been read over, the parties to the contract each signed by pressing his thumb-nail into the wet clay, which was then dried and preserved. Later engraved seals came into use for the purpose of authenticating documents.

Outside the walls lay a ring of fields, some of them private property, some of them common land, but all alike paying tithes to the city-god. Beyond the culti-



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THE TOMB OF EZRA, A SHRINE DEAR TO THE HEART OF INNUMERABLE JEWS

The Tomb of Ezra lies near the junction of the Tigris and the Euphrates, where they flow together and form the Shat-el-Arab. The town of Kut is about half way between Korna and Bagdad, on the Tigris.

vated fields lay the pasture land, which was all held in common. The fields were covered with a network of canals, which distributed the precious river-water, and the whole system of irrigation was carefully regulated and supervised.

KINS-PEOPLE OF THE JEWS

Not much later than 4000 B. C. we find the whole land in the power of the representatives of the same Semitic race which has given us Abraham, Moses, and David, and also Mahomet and Islam. The Semitic rule makes its appearance in the person of an impressive and romantic figure, one of the first of the great founders of world-empires, Shargani-shar-ali, better known as Sargon, King of Akkad.

Fortunately we know, with a fair amount of certainty, when he reigned, for the last king of Babylon, Nabuna'id, states that when he laid bare the foundation-inscription of Naram-Sin, son of Sargon, in the temple of Shamash, at Sippara, he was informed that Naram-Sin had reigned 3,200 years before his time. This fixes Naram-Sin at about 3750 B. C. and Sargon about 3800 B. C., so that he belongs to about the time of the rise of settled government in Egypt.

A GARDENER BECOMES KING

Apparently, like many of the great men of history, he was of humble and obscure birth. The Chronicle of Kish states that "at Akkad, Sharrukin, the gardener, warder of the temple of Zamama, became king." But, whatever his origin, the impression which he made on following ages was great and lasting. When men looked back to the beginnings, they saw the figure of Sargon standing, great and vague, the first man who really counted in their history; and they honored him accordingly.

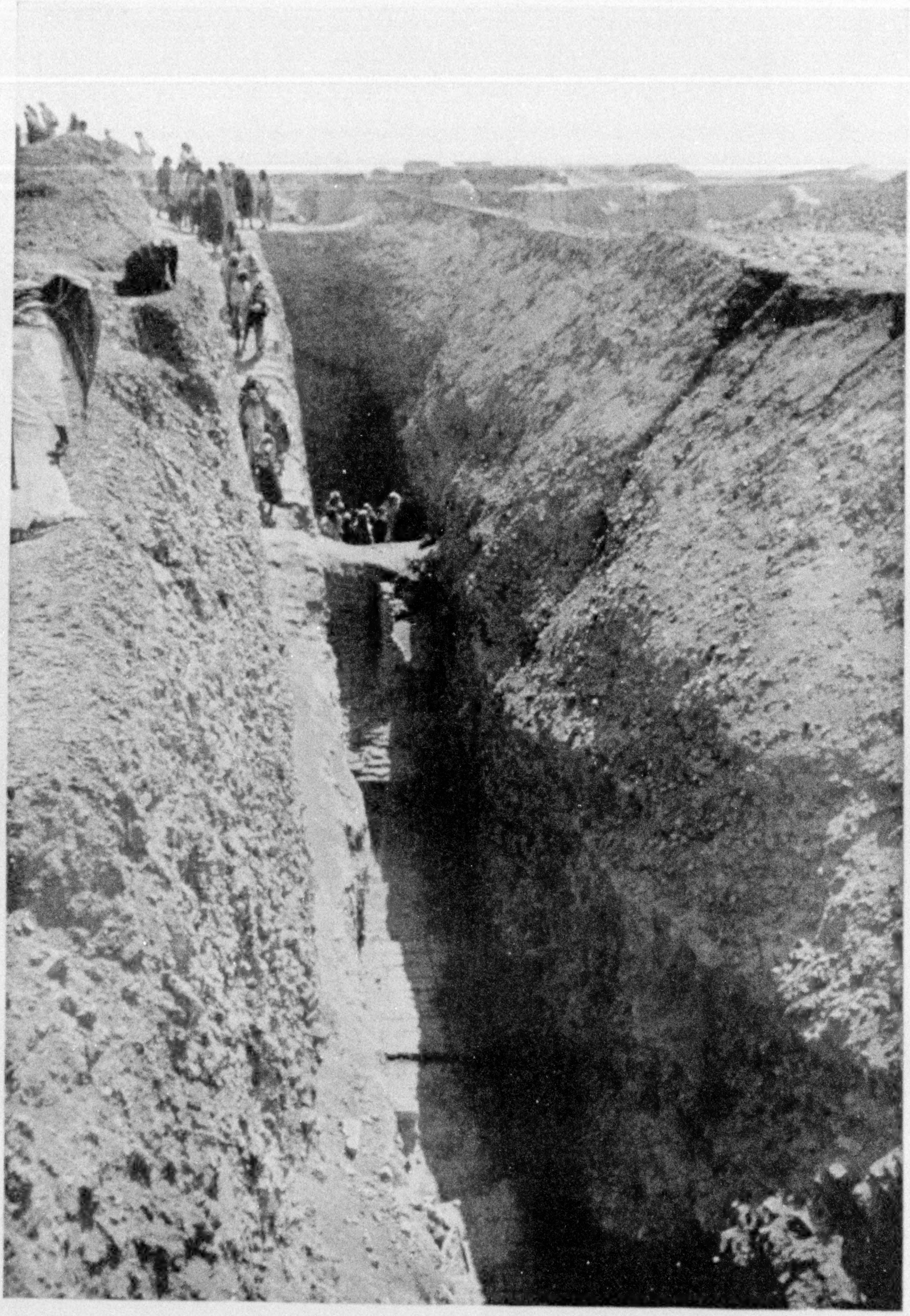
One of the greatest of Assyrian conquerors called himself Sargon also, after this early king, and around the name of the first unifier of the land there grew up a legend which presents a curious parallel to the story of the infancy of Moses. The Assyrian scribes of the eighth century B. C. make him relate the story of his early days, as follows:

"Sargon, the powerful king, King of Akkad, am I.
My mother was of low degree, my father I did not know.
The brother of my father dwelt in the mountain.
My city was Azupirani, situate on the bank of the Euphrates.
My humble mother conceived me; in secret she brought me forth.
She placed me in a basket-boat of rushes; with pitch she closed my door.
She gave me over to the river, which did not rise over me.
The river bore me along; to Akki, the irrigator, it carried me.
Akki, the irrigator, . . . brought me to land.
Akki, the irrigator, reared me as his own son.
Akki, the irrigator, appointed me his gardener.
While I was gardener, Ishtar looked on me with love.
(Forty ?)-four years I ruled the kingdom."

This gardener-king was evidently a man of genius and force. Not only did he unite Babylonia under his rule, but he carried his conquests westward to the Mediterranean, north and east to Armenia and Elam, and south to Arabia and the islands of the Persian Gulf. His doings were held up as the model for all subsequent kings, and if the omens in any reign were the same as those under which the great Sargon of Akkad had gone forth to victory, any king of Babylon or Assyria would march out, confident that success was certain.

About 2300 B. C. there rises another great figure, one of the men who mold human history and keep the world moving onward—a man also who, if some scholars are right, came into close contact with Abraham, and, great as he was, found the contact not at all to his advantage.

In Genesis xiv we read how "Amraphel, King of Shinar; Arioch, King of Ellasar; Chedorlaomer, King of Elam, and Tidal, King of Goiim," made war on the kings of Sodom and Gomorrah, who had rebelled against their overlord Chedorlaomer; how Abraham's nephew, Lot, was captured by them, and how the Patriarch rescued Lot and defeated the invaders. Now these kings may possibly be identified with actual kings of the time. Tidal, King of Goiim, may be Thargal of Gutium; Arioch of Ellasar may be Rim-Sin



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UNEARTHING ANCIENT BABYLON FROM BENEATH THE DEBRIS OF CENTURIES

Babylonia is covered with cities hidden by the accumulations of thousands of years. And yet never was debris kinder, for it acted as a safe in which treasures of millenniums before Christ could be held in trust for the coming of a generation that would appreciate their value, and that could correctly interpret their meanings. But for the burial from human sight which time gave to the structures and relics of the ancient civilization of the Euphrates and Tigris River country they would have been destroyed, even as the priceless marbles of Rome were destroyed in the manufacture of lime and the magnificent structures of that great city torn down to secure the iron with which the marble blocks were jointed together.

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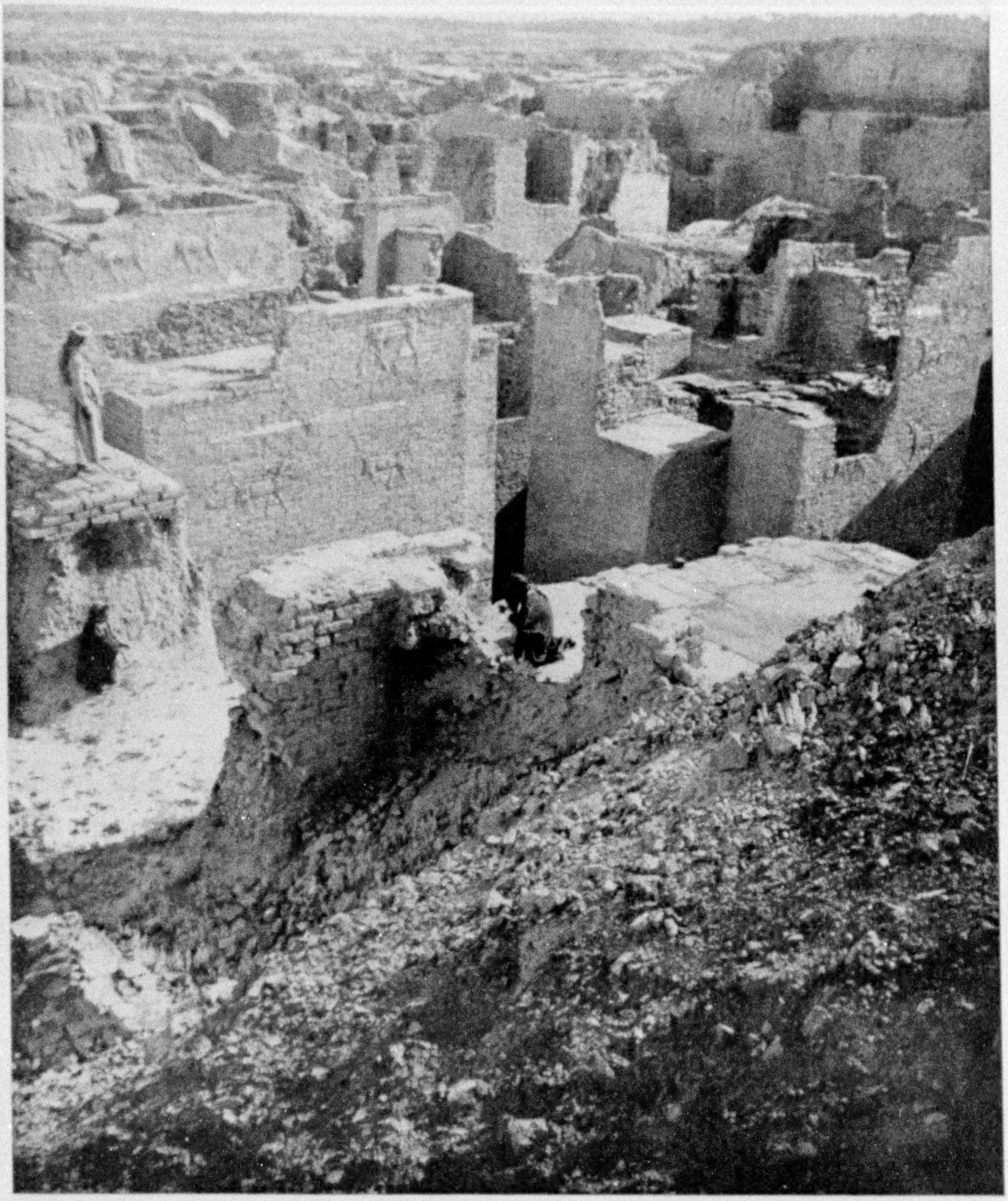
EXCAVATORS UNEARTHING THE REMAINS OF ANCIENT BABYLON

The citizen of a modern city would probably feel more at home in the Babylon of 5,000 years ago than in medieval Europe. The average Babylonian was no wild savage, but a law-abiding citizen, a faithful husband, good father, kind son, firm friend, industrious trader, or careful man of business. The story of how man came again to know these ancient civilizations, of how we have a more intimate knowledge of the ways of people who lived thousands of years before the Christian era than we have of some who lived so recently as medieval times, constitutes one of the most fascinating passages in the history of exploration.

XUM



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A VIEW OF THE RUINS OF BABYLON

"To us the time of Abraham seems almost incredibly distant, and we can scarcely bring ourselves to believe that civilized life was actually possible then; but the Code of Hammurabi is sufficient to assure us that in Babylonia, at all events, life in Abraham's days was practically as thoroughly organized and as carefully regulated as it is in our own" (see page 141).

of Larsam, whose name may also be read Eri-aku; Chedorlaomer is simply Kudur Lagamar, a good Elamite name.

THE FIRST GREAT LAW-GIVER

There remains Amraphel, King of Shinar, who is the most interesting figure of all, if, as seems not unlikely, he is to be identified with Hammurabi, King of Babylon, the first great law-giver of the world whose laws have come down to us. At the time of the invasion of Palestine it seems as though he and the others were vassals of the Elamite Chedorlaomer. Perhaps the defeat sustained at Abraham's hands weakened the Elamite King's authority. At all events we find Hammurabi firmly seated on the throne of Babylon by about 2297 B. C.

Notwithstanding the unfortunate incident with Abraham, he was a great conqueror, subduing the Elamites, and asserting his dominion over the whole of Babylonia and Mesopotamia; but he was far more.

He was one of the first of all kings to understand that a king's glory is to be the father of his people. And so in his inscriptions, while we read of successful wars, we hear far more of canals dug, and temples restored and city walls built, while his favorite titles are "Builder of the Land," and "King of Righteousness."

His great memorial is the famous Code of Laws, of which a copy, engraved on stone, was found by M. de Morgan at Susa and is now in the Louvre. Hammurabi begins his Code with a little bit of self-glorification, perhaps not unwarranted.

"I am the pastor, the saviour, whose sceptre is a right one, the good protecting shadow over my city; in my breast I cherish the inhabitants of Sumer and Akkad. By my genius in peace I have led them, by my wisdom I have directed them, that the strong might not injure the weak, to protect the widow and orphan. . . . By the command of Shamash (the Sun god), the great Judge of Heaven and Earth, let righteousness go forth in the land. . . . Let the oppressed who has a case at law come and stand before my image as King of Righteousness, let him read the inscription, and understand my precious words. The inscribed stone will explain his case to him, and make clear the law to him, and his heart, well pleased, will say, 'Hammurabi is a master, who is as the father who begat his people!'"

LAWS OF HAMMURABI

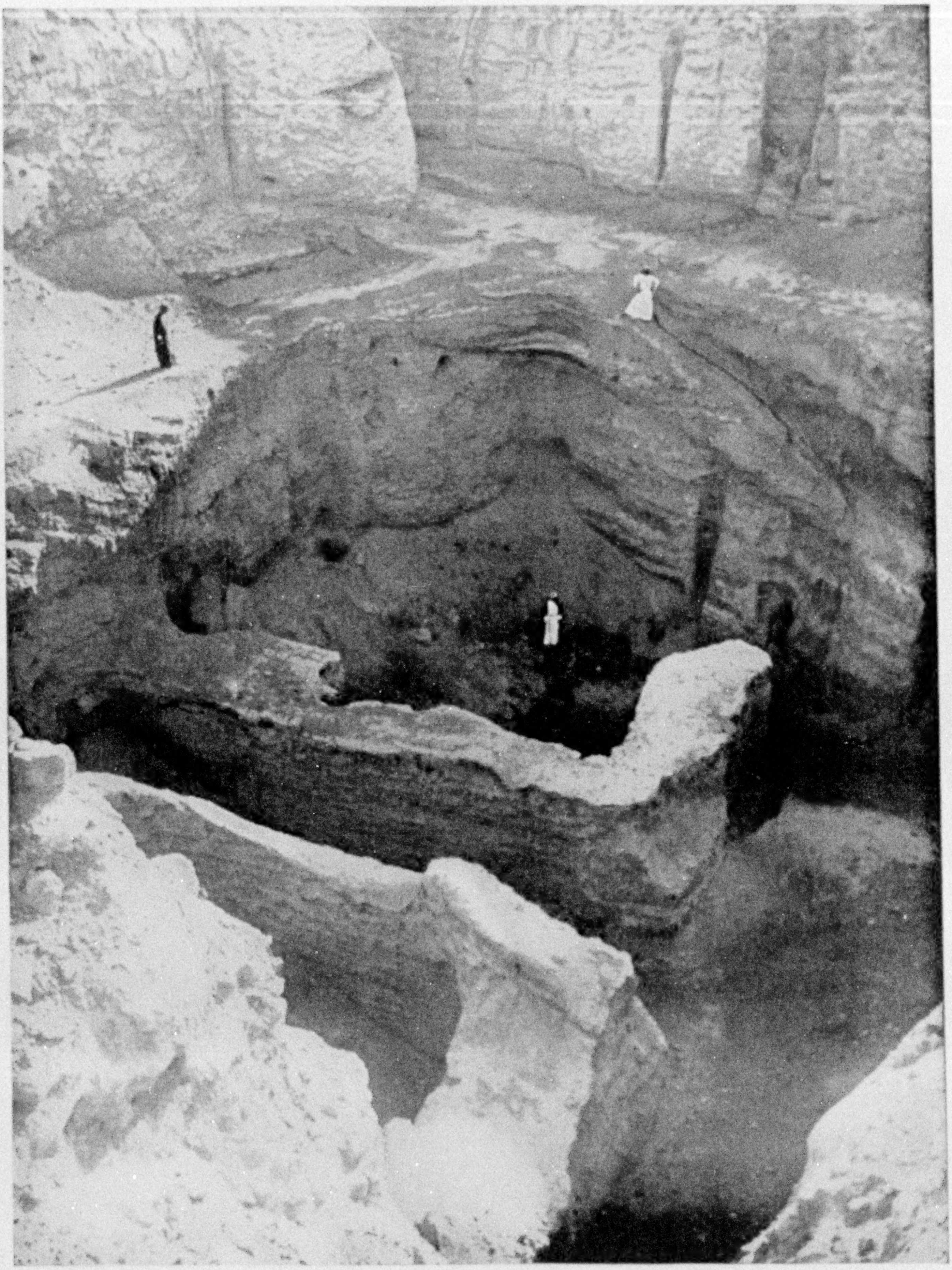
Then follow 282 sections regulating almost every conceivable incident and relationship of life. Not only are the great crimes dealt with and penalized; life is regulated down to its most minute details.

There are marriage laws and breach of promise laws, laws for the guardianship of the widow and the orphan, irrigation laws, anticipations of modern land legislation, providing that if land is not cultivated the holder must give account and pay compensation, and licensing laws which would rather surprise "the trade" at the present day. "If a wine merchant has allowed riotous characters to assemble in her house, and those riotous characters she has not seized and driven to the palace, *that wine merchant shall be put to death.*"

No such complete regulation of the affairs of human life was known elsewhere in ancient days; nor, indeed, it may be said, till Roman law asserted its power over the world. Of course, it does not follow that the glory of all this legislation belongs to Hammurabi, who, in all probability, was merely the codifier of laws already existing. Still, his honor, even on that footing, is not small, and the revelation which his Code gives us of a well-ordered and highly disciplined community is simply amazing.

To us the time of Abraham seems almost incredibly distant, and we can scarcely bring ourselves to believe that civilized life was actually possible then; but the Code of Hammurabi is sufficient to assure us that in Babylonia, at all events, life in Abraham's days was practically as thoroughly organized and as carefully regulated as it is in our own (see article by Professor Clay in this number).

The great law-giver of Babylonia, Hammurabi, founded an empire which endured through five subsequent reigns, and closed about 200 years after the ad-



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THE CHIEF TEMPLE OF BABYLON, SACRED TO THE NATIONAL GOD, MARDUK

There were hundreds of rooms in this temple. It was known as "the lofty house." A "sacred way" built above the street connected it with the King's palace. Along this the images of the gods and goddesses which constituted the court of Marduk were carried on festive occasions.

vent of its first founder. The steady average length of the reigns speaks of the permanence and stability of the work which had been done by the great and wise man who had united all the wrangling communities of Babylonia into a single strong State.

But no human work can endure forever, and the first empire of Babylonia was no exception to the rule. It suffered the fate common to most early empires. The more highly cultured and advanced and more peaceful people were overwhelmed by the descent of a ruder and more warlike race, who had envied the wealth and prosperity of their neighbors.

The conquering race, in this instance, was one of those wild mountain peoples who occupied the hill country between the Caspian Sea and the Persian Gulf. Finding a footing on the Babylonian plain near the mouth of the rivers, they gradually advanced, until their chief ascended the throne of Babylon and set up a new dynasty. They were called the Kassites, and for over 570 years they ruled over Babylonia, but a Babylonia that was no longer as it had once been, the one great power in the world of the ancient Orient.

A new power, Assyria, had begun to rise above the horizon, and from now onward, with occasional intervals of weakness and decline, this power strides like a Colossus over the whole of the ancient world, terrifying the nations by its remorseless cruelty, and crushing down all opposition and all national aspirations by the ruthless force of one of the most tremendous implements of warfare ever forged by the hand of man.

ASSYRIAN RUTHLESSNESS

With the possible exception of the Huns, or the wild hordes of Tamerlane, there has probably never existed in the history of the world a power so purely and solely destructive, so utterly devoid of the slightest desire to make any real contribution to the welfare of the human race, as Assyria. But the Huns and the hordes of Tamerlane were untaught savages.

In the case of Assyria you have a highly organized and civilized people, skilled to an astounding degree in the arts, with all the power to do great things for humanity, but absolutely deficient in the will.

If you can imagine a man with no small amount of learning, with all the externals of civilization, with a fine taste in certain aspects of art, and a tremendous aptitude for organization and discipline, and then imagine such a man imbued with the ruthless spirit of a Red Indian brave and an absolute delight in witnessing the most ghastly forms of human suffering, you will have a fairly accurate conception of the ordinary Assyrian, king or commoner; the outside, a splendid specimen of highly developed humanity—the inside a mere ravening tiger.

There have been other great conquering races which could be cruel enough on occasion, but at least they contributed something to the sum of human knowledge or achievement. The Roman Empire, for instance, ruthless as were its methods often, was actually a great boon to the world.

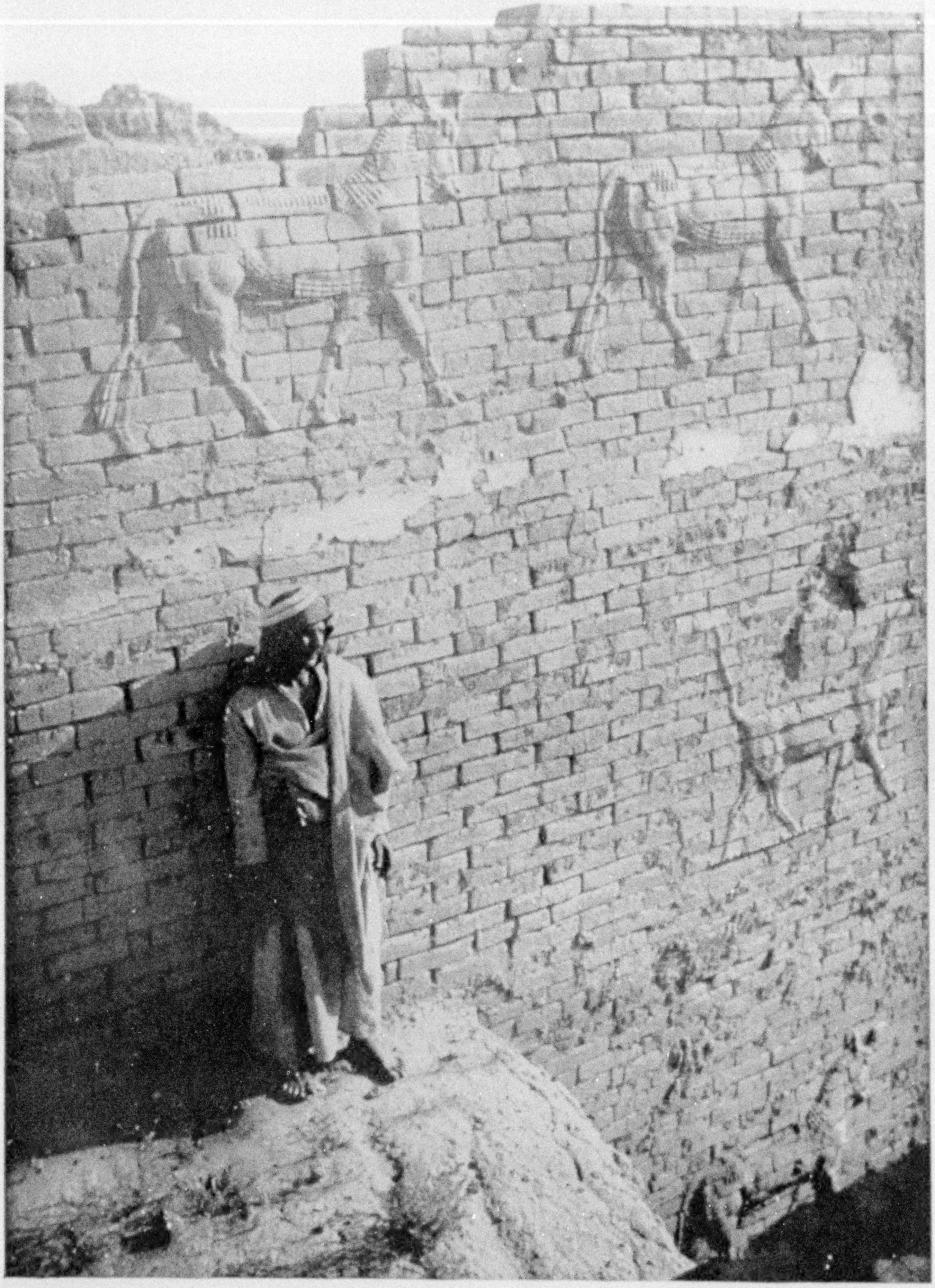
ASSYRIA AN IMITATOR

Assyria made no such contribution to human life. Totally lacking in originality, she took her art, her language, her literature, and her science from the elder Babylonian race upon which she waged such constant war.

She created nothing; she existed simply to destroy; and when she ceased to destroy, she was destroyed. In a word, she was the scourge of God, or, as Isaiah put it, with his vivid insight, her function in the world was just to be God's ax and saw to do the rough hewing that Providence needed for the shaping of the race.

Early in their history the Babylonians seem to have sent a colony northwestward up the rivers into the land of Mesopotamia. There the colonists founded a city which they called Assur, after their god Ashur (see map, page 216). In the time of Hammurabi, Assur was still merely a colony of Babylonia and subject to the empire.

In the less luxurious uplands of Mesopotamia the race had no temptation to degeneracy. Warfare with their wild neighbors from the hills, and warfare



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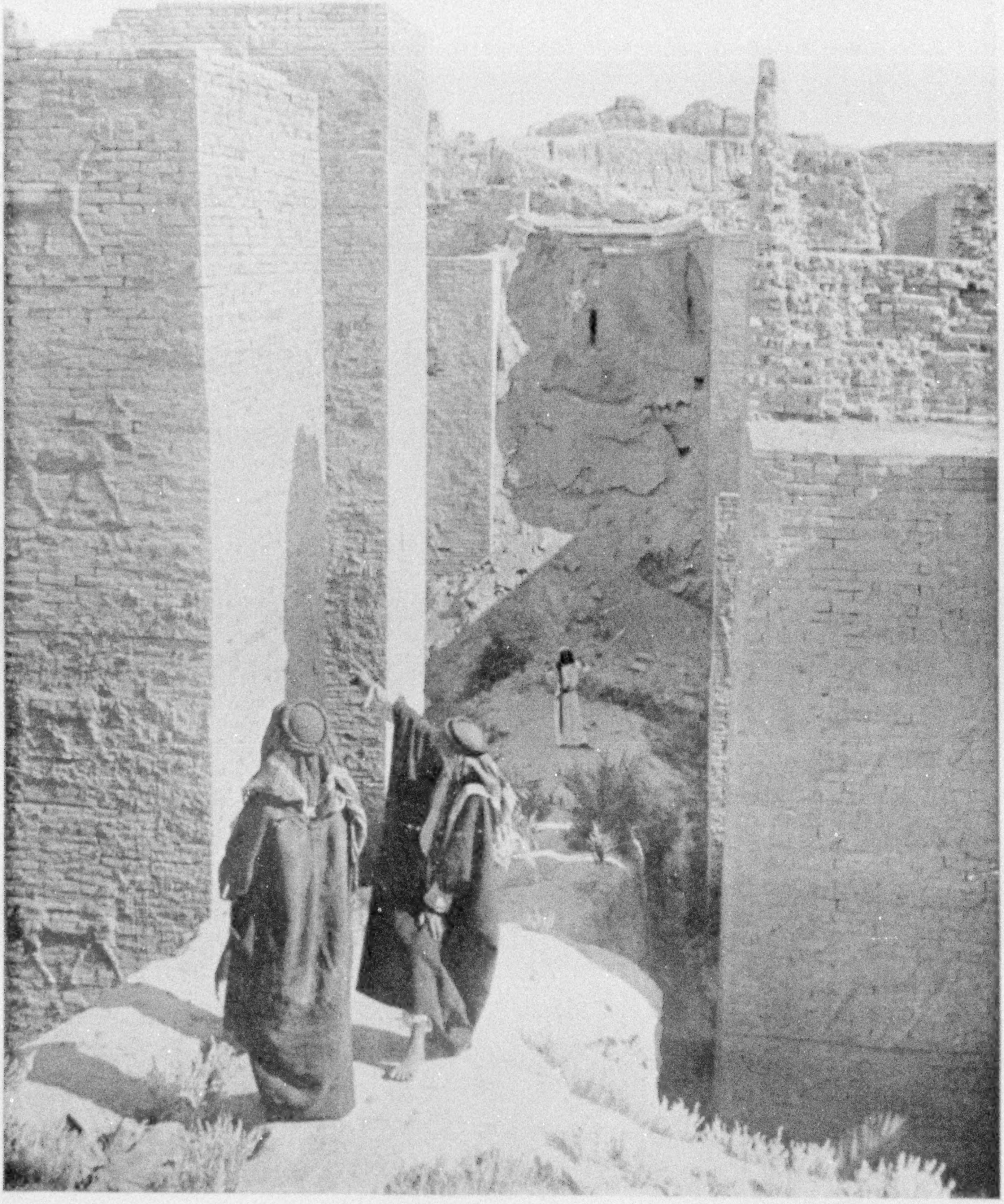
RELIEFS OF SACRED BULL AND DRAGON ON WALL OF ISHTAR GATE: BABYLON

King Sargon, the gardener king, nearly 6,000 years ago, reviewed his reign much as a President of the United States does his administration in his farewell message. He calls attention to the fact that he restored and colonized ruined cities, that he made tracts of barren lands fertile, that he gave his nation a splendid system of irrigation works, that he protected the needy from want and the weak from oppression, filling the nation's granaries with corn, bringing down the high cost of living, and finding new markets (see page 137).



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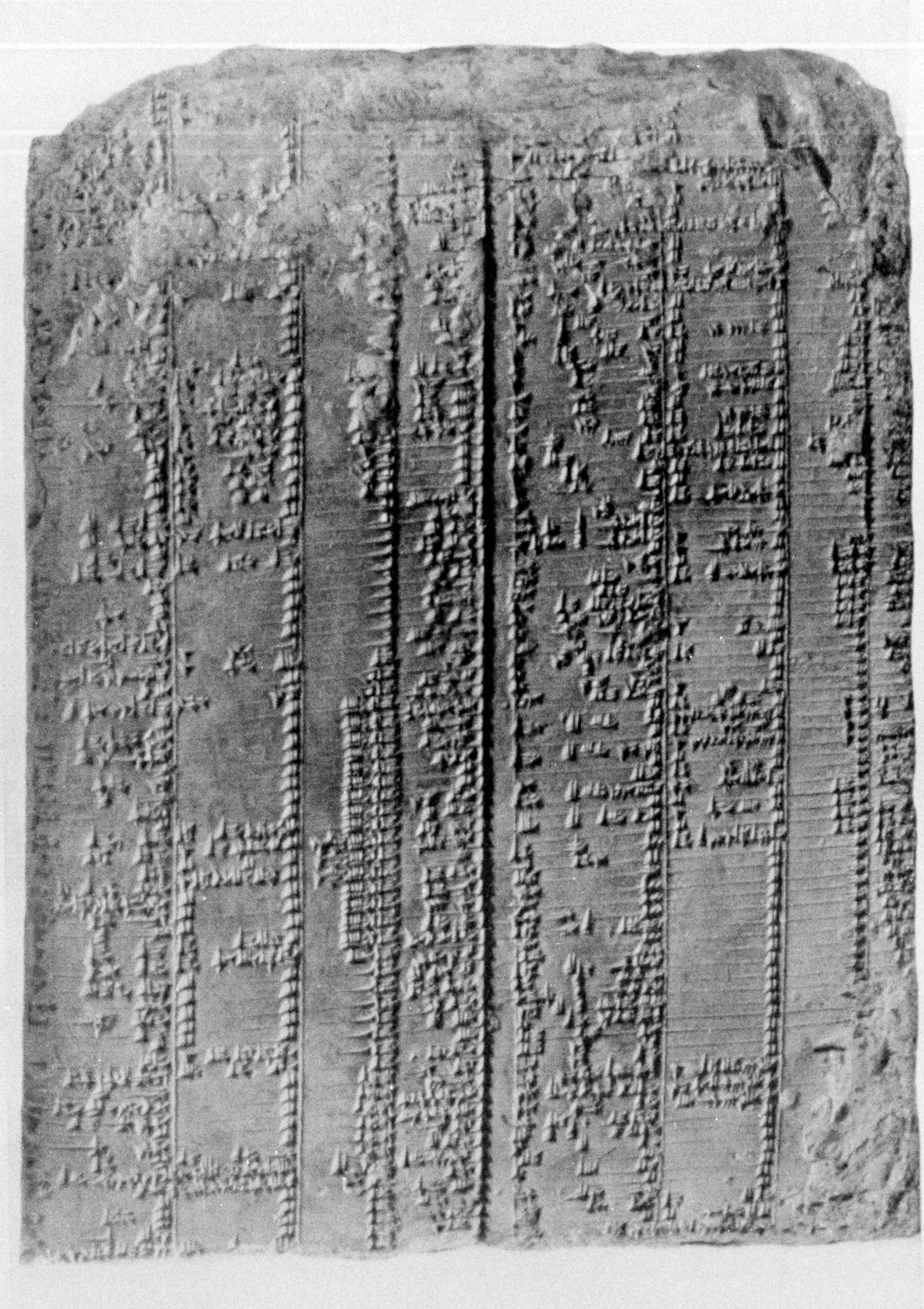
THE PROCESSIONAL ROAD TO NEBUCHADNEZZAR'S THRONE HALL: BABYLON

Nebuchadnezzar was the last great warrior that this land produced (see page 157). He lived much nearer to our time than to the time of the gardener-king, Sargon, who is the first Babylonian king of whom we have definite knowledge (see page 137) and who preceded Nebuchadnezzar by 3,200 years.



Photograph from Prof. Albert T. Clay

A 5,000-YEAR-OLD DICTIONARY, IN TWO SECTIONS OF FOUR COLUMNS EACH

The first contains the Sumerian; the second, the character to be explained; the third, the name of the character, and the fourth, the Babylonian, equivalent to the Sumerian in the first. The reader will probably infer that the school boy or girl of 5,000 years ago had a much harder time of it than today. The Sumerians were a wonderful people, who were already civilized when present history begins, 6,000 years ago (see page 135).

even more constant with the wild beasts, the lions and elephants, which abounded in the district, kept them hardy and bold, and welded them together into a people capable of and ready for great achievements should the opportunity arise.

This opportunity came with the Kassite conquest of Babylonia. The familiar rule of their mother-city was broken, and they owed no allegiance, but rather the reverse, to the conquerors. The patesis of Assur threw off the yoke of Babylon, called themselves kings, and established a kingdom (Assyria) which speedily became a formidable rival to the more ancient southern State.

FIVE HUNDRED YEARS OF STRIFE

Five centuries or so ensued, filled with more or less constant strife and bickering between the two States. In the meantime Egypt, under the great soldier Pharaohs of the XVIIIth dynasty, took advantage of the divisions of the only two powers that could have resisted her conquest of all Palestine and Syria, and pushed her empire as far as to the banks of the Euphrates.

In the letters of the time which have been preserved (the Tell-el-Amarna tablets) it is interesting and amusing to see the eagerness with which the kings of Assyria, Babylonia, and Mitanni plead for recognition by the Egyptian Pharaoh, each striving to impress upon the great king the value of his own friendship and the worthlessness of his neighbor's.

Pharaoh of Egypt is the dominating figure of the whole world at this stage, and the kings of the East, whatever their private pride, are, in their public correspondence, his very humble and obedient servants. The balance of power, however, was to be readjusted before long.

There is no need to wade through the dreary story of Assyrian conquest, save where we find it touching upon the Scripture records. King after king repeats, with monotonous reiteration, the story of endless campaigns, all marked by the same ruthless slaughter, the same ghastly cruelty, and the same lack of permanent results. Apparently it was quite impossible for an Assyrian king to be a peaceful sovereign. His State lived by and for the army alone, and if he did not give the army successful employment he was quickly murdered to make way for some one who would lead the troops to conquest and plunder.

A KING REVIEWS HIS REIGN

Take, as a single specimen of an Assyrian conqueror, Ashur-natsir-pal III, whose magnificent palace at Kalah, with its alabaster slabs exquisitely carved in relief, was excavated by Layard in the forties of last century. The slabs are now one of the glories of the British Museum, where also the statue of the great conqueror stands.

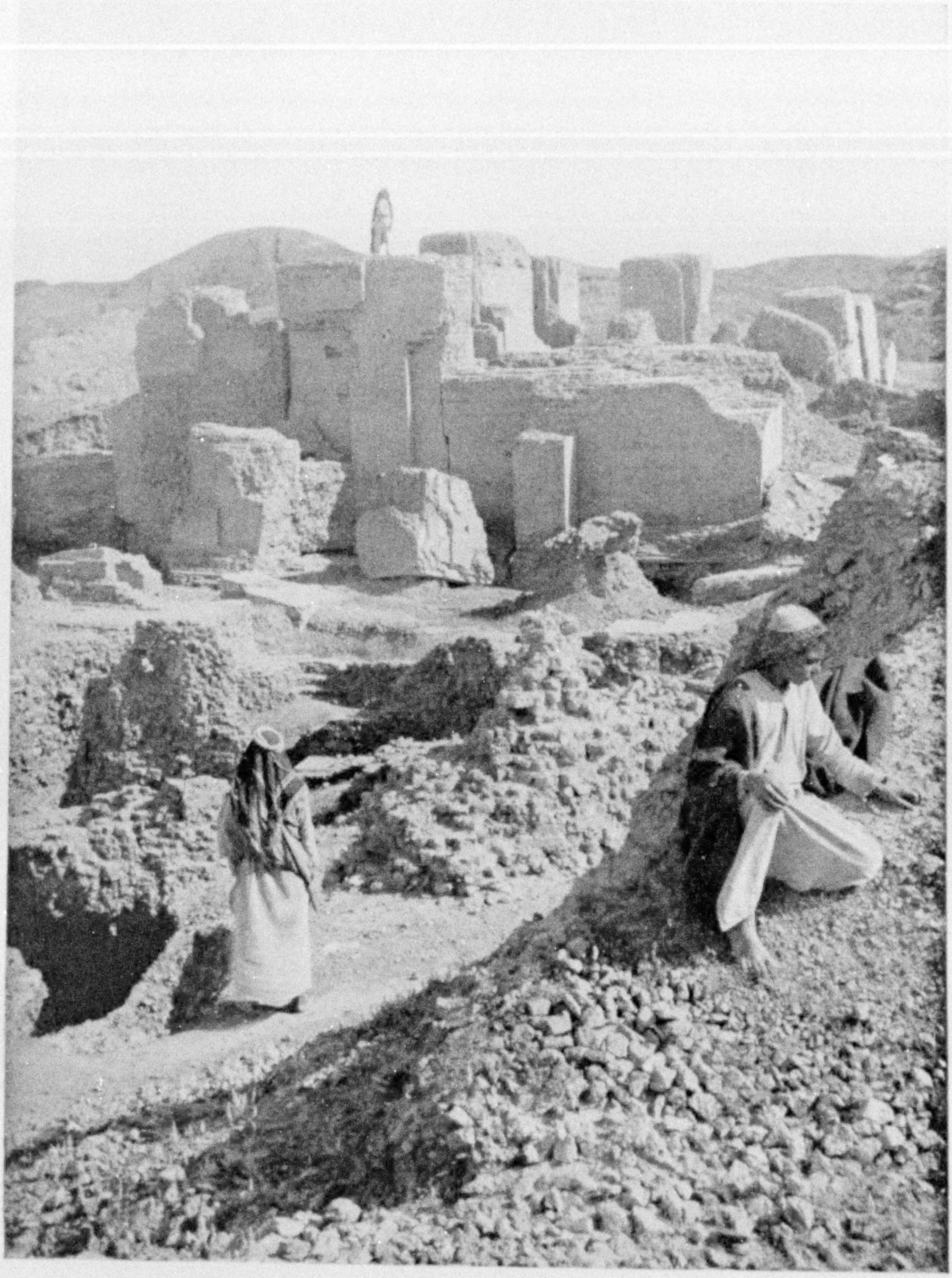
We have the record of eighteen years of his reign: there is scarcely a year in which he was not at war; and this is the kind of war he made:

"To the city of Tela I approached. The city was very strong; three fortress-walls surrounded it. The inhabitants trusted to their strong walls and their numerous army; they did not come down or embrace my feet. With battle and slaughter I attacked the city and captured it. Three thousand of their fighting men I slew with the sword; their spoil, their goods, their oxen, and their sheep I carried away; many captives I burned with fire.

"I captured many of their soldiers alive; I cut off the hands and feet of some; of others I cut off the noses, the ears, and the fingers; I put out the eyes of many soldiers. I built up a pyramid of the living and a pyramid of heads. On high I hung up their heads on trees in the neighborhood of their city. Their young men and their maidens I burned with fire. The city I overthrew, dug it up, and burned it with fire; I annihilated it."

A STAGGERING CRUELTY

The imagination is staggered at the very thought of that pyramid of the living—human beings piled one upon another, suffocating, strangling, perishing slowly and miserably before that other pyramid of their more fortunate friends to whom death had come swiftly, and at the thought of the monster who not only did this, but gloried in it, and caused the



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RUINS OF THE GORGEOUS PALACE OF NEBUCHADNEZZAR; BABYLON, MESOPOTAMIA

The civilization of Italy is young compared to the duration of civilization in the Euphrates Valley, if we calculate that the culture of modern Rome is approximately 2,800 years old. Assuming that the civilization of the Euphrates perished with the destruction of Babylon in 535 B. C. (see page 161), we know that it was already 3,300 years old, for back in 3800 B. C. there were already in existence on the banks of the Euphrates cities with culture and society and literature almost as complex as that of today.

story of his brutality to be written indelibly upon the walls of his house.

But this is not the whole of the picture. Side by side with the ruthlessness of this monster you have to place the other aspect of his nature, where you see him, a great and lordly gentleman, with a notable taste for the fine arts, planning and executing some of the most magnificent of buildings.

His great palace of Kalah stood 350 feet square on a high platform facing the temple which he had built to the god Ninib. In its center was a court measuring 125 feet by 100. Round this court were grouped the innumerable rooms and galleries of the great palace, chief among them the throne room, which measured 154 feet by 33. The curious narrowness of the chambers is very noticeable, showing the continued prevalence of the old Babylonian tradition, which was due to lack of good building stone and scarcity of timber.

Round each room ran a range of sculptured alabaster slabs, showing the king at war, at the hunt, fording the river, or marching through the mountains; while all the cruel details of his merciless warfare were represented to the life. Inscriptions ran along the slabs, giving practically a history of the king's reign from year to year.

The narrow galleries were roofed with cedar beams, decorated with gold, silver, and bronze, and gay with color. At the doorways stood monstrous figures of winged man-headed bulls or lions, head and shoulders carefully wrought out as though the creatures were leaping out of the walls, the rest left only suggested in outline. These were the divine spirits which guarded the entrance to the king's house.

DESCRIBES HIS PALACE

Ashur-natsir-pal thus describes his own palace: "A palace for my royal dwelling-place, for the glorious seat of my royalty, I founded for ever, and splendidly planned it: I surrounded it with a cornice of copper. Sculptures of the creatures of land and sea carved in alabaster I made, and placed them at the doors. Lofty door-posts of cedar wood I made, and sheathed them with copper, and set them upon the gates. Thrones of costly woods, dishes of ivory containing silver, gold, lead, copper, and iron, the spoil of my hand, taken from conquered lands, I deposited therein."

Such was a great Assyrian monarch on the evidence of his own records, which there is no reason to doubt; surely the strangest combination of absolute brute savagery and luxurious and artistic taste that has ever walked this earth. Multiply Ashur-natsir-pal by the dozen, and you have some idea of the misery and the slaughter for which the great Assyrian Empire was responsible during a period of at least 500 years.

SENNACHERIB RAVAGES PALESTINE

Ashur-natsir-pal was succeeded by Shalmaneser II (860-825 B. C.), first of the Assyrian kings who make mention of Israel in their inscriptions. He reigned for thirty-five years, and during that time he commanded in thirty-two campaigns, which gives an idea of how much spare time for peaceful industry was left to the Assyrian State. As a matter of fact, Assyria lived upon spoil. She was simply the greatest of all robber communities, and her staple industry was plundering the unlucky peoples who were rich enough to excite her envy and too weak to resist her violence.

Sennacherib was perhaps the most widely famous of all Assyrian monarchs. For us, of course, Sennacherib is the Assyrian who "came down like a wolf on the fold," and we think of him chiefly as the assailant of Judah, whose pride was so mysteriously brought low by the great disaster recorded in II Kings xix: 35: "The angel of the Lord went out, and smote in the camp of the Assyrians an hundred four score and five thousand; and when they arose early in the morning, behold they were all dead corpses."

As a matter of fact, however, Sennacherib's dealings with Hezekiah of Judah were but a small portion of a vast campaign, and the disaster which happened to his army, perfectly accurately recorded in Scripture, took place not near Jerusalem, but down on the frontier of Egypt.

XUM

What actually happened seems, so far as can be judged, to have been somewhat as follows: With the accession of the new Assyrian king came, as always, rebellion among the subject States. Egypt was busy in the background with promises of help, never to be realized, and all the Syrian States, including Judah, revolted. Sennacherib marched into Palestine, ravaging and destroying, laid siege to Ekron, and when the Egyptian army advanced to its relief, utterly defeated it at the battle of Altaku.

HEZEKIAH MAKES READY FOR WAR

Meanwhile Hezekiah had been making feverish preparations for defense against the storm which was about to burst upon him. He repaired the walls of Jerusalem, and in order to make certain that the waters of the spring Gihon should be secured for the city and not left for the besiegers, he dug the tunnel on the side of the southeast hill of Jerusalem, referred to in the Siloam inscription.

Sennacherib, fresh from his victory over the Egyptians, sat down before Lachish, and besieged and took it. While he was thus engaged, Hezekiah's heart failed him, and he sent his submission to the Assyrian king, as recorded in II Kings xviii: 13-16, paying a heavy tribute as the price of safety. Sennacherib, however, evidently doubted Hezekiah's faithfulness, and sent a division of his army under a political officer, the Rab-Shakeh, with a demand for surrender.

But on this occasion Hezekiah, encouraged by Isaiah, refused to yield any farther than he had already done, and Isaiah bade the king return a scornful and defiant answer, giving Hezekiah the assurance that the Assyrian should never even succeed in investing the city.

AN OUTBREAK OF BUBONIC PLAGUE?

So it came to pass. The conqueror had more important things to think of than the immediate destruction of a small and obscure city like Jerusalem. Jerusalem's turn would come in due time; meanwhile it could wait. So he marched with the main army straight on Egypt, leaving a division to mask Jerusalem. He encamped at Pelusium, on the Egyptian frontier, and everything was ready for a great battle which would have decided the fate of the ancient world.

And then some terrible obscure disaster—the legend that links it with mice suggests that it may have been an outbreak of the bubonic plague—overtook the Assyrian army. Sennacherib had to retreat with the broken remnants of his force, to call in his column from before Jerusalem, and to return discomfited to Nineveh. So Jerusalem was saved, as Isaiah had foreseen.

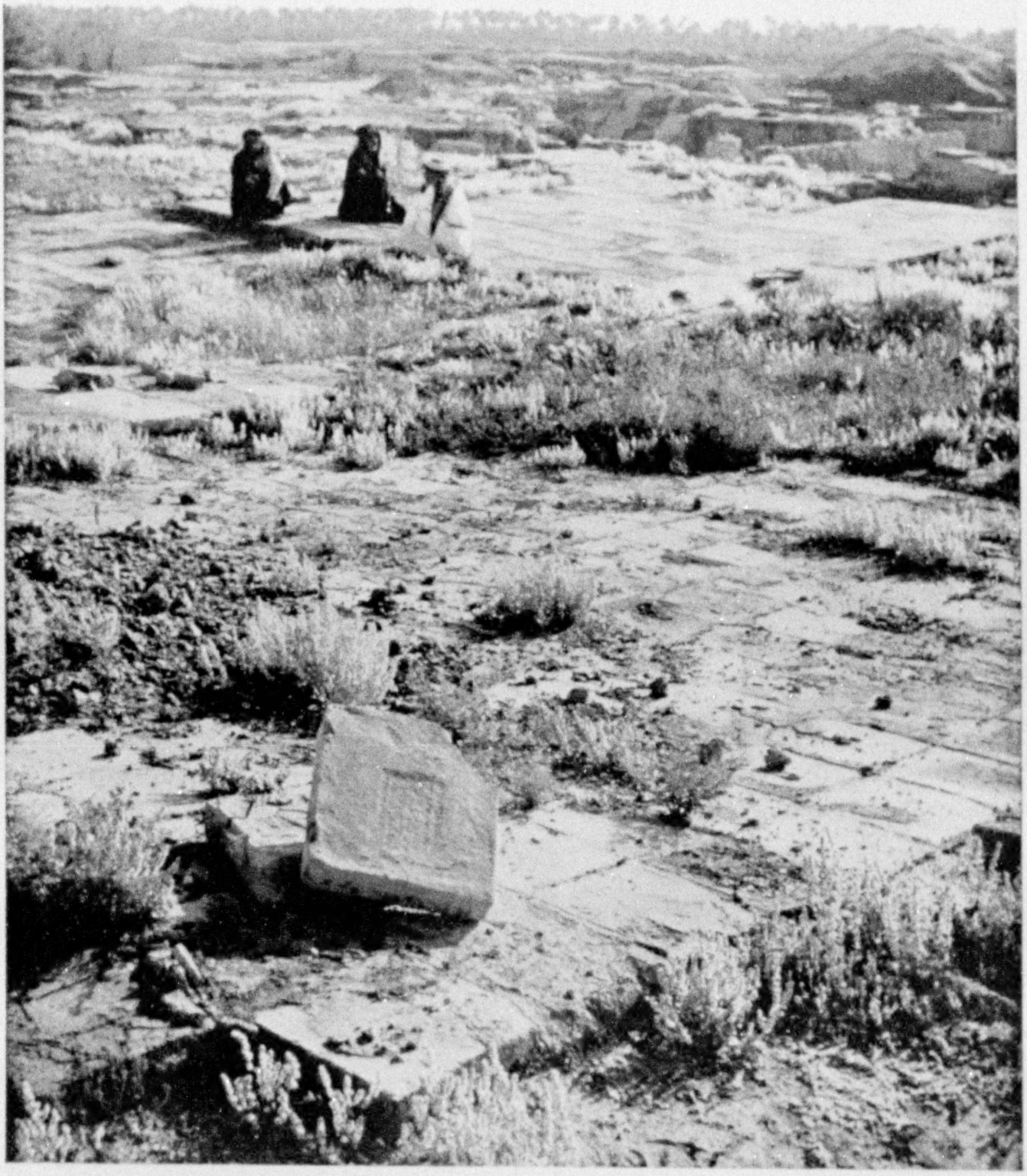
Sennacherib's own account of the campaign against Judah is as follows: "But Hezekiah of Jerusalem, who had not submitted to me, 46 of his walled towns, numberless forts and small places in their neighborhood I invested and took by means of battering-rams and the assault of scaling-ladders, the attack of foot-soldiers, mines, and breaches. Two hundred thousand, one hundred and fifty, great and small, men and women, horses, mules, asses, camels, oxen, and sheep without number I carried off from them and counted as spoil.

"Hezekiah himself I shut up like a bird in a cage in Jerusalem, his royal city. I raised forts about him, and the exits of the chief gate of this city I barred. . . . Himself the fear of my august Lordship overpowered. The Arabians and his faithful ones, whom he had brought in for the defense of Jerusalem, his royal city, fell away.

"Along with 30 talents of gold and 800 of silver, precious stones, carbuncles, *kassû* stones, great pieces of lapis lazuli, ivory thrones, elephant hides and tusks, *ushu* wood, boxwood, all sorts of things, a huge treasure, and his own daughters, the womenfolk of his palace, men and women singers he brought after me to Nineveh, the city of my Lordship; and for the payment of the tribute and to do homage he dispatched his envoy" (Taylor cylinder inscriptions).

HEZEKIAH'S TRIBUTE

This inscription bears out perfectly the account given in II Kings xviii: 13-16: "Now in the fourteenth year of King Hezekiah did Sennacherib, King of Assyria, come up against all the fenced cities of Judah, and took them. And Hezekiah King of Judah sent to the King



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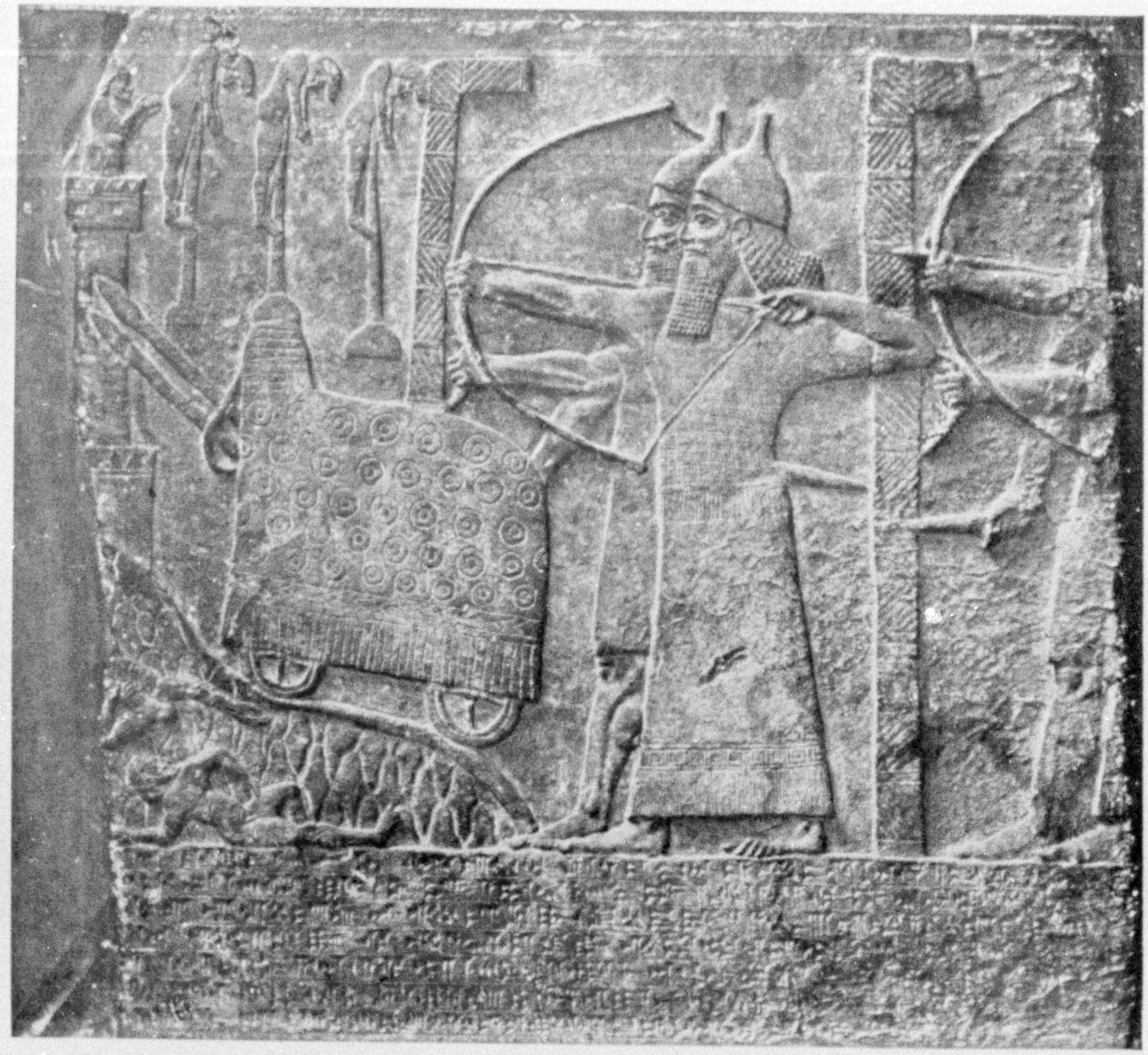
THE BRICK FLOOR OF NEBUCHADNEZZAR'S THRONE HALL, LOOKING TOWARD THE EUPHRATES; BABYLON

The outer wall of the palace was made of bricks stamped with the name of Nebuchadnezzar and was some 23½ feet thick, the inner wall, also made of brick, being over 44 feet thick, while the space between the two walls, nearly 70 feet, was filled in with sand and other material, the total thickness thus being nearly 136½ feet. The burnt bricks of which the retaining walls were composed were laid in asphalt and are so compactly joined that it is impossible to separate them into their layers.



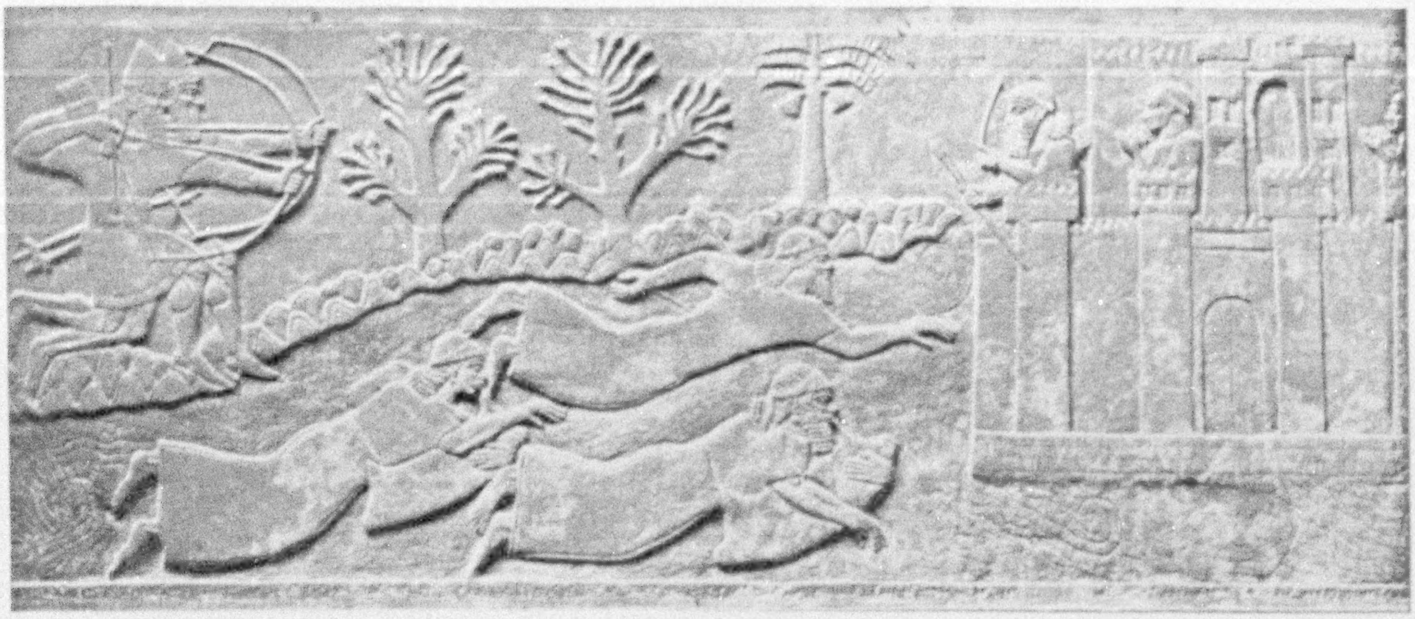
HOW BABYLONIA AND ASSYRIA WAGED WAR

One might reconstruct the entire system of military tactics of Babylonian and Assyrian kings from the records in bas relief left by them on slabs of stone. In this picture we see the method of attacking a city with battering rams and archers. The impaled prisoners in the background show that Sherman's epigrammatic description of war fitted as well in 725 B. C. as it does in 1916 A. D.

of Assyria to Lachish, saying, I have offended: return from me; that which thou puttest upon me I will bear. And the King of Assyria appointed unto Hezekiah King of Judah three hundred talents of silver and thirty talents of gold. And Hezekiah gave him all the silver that was found in the house of the Lord, and in the treasures of the king's house. At that time did Hezekiah cut off the gold from the doors of the temple of the Lord, and from the pillars which Hezekiah King of Judah had overlaid, and gave it to the King of Assyria."

But while both records are at one as to the straits to which Hezekiah was reduced, the Assyrian inscription makes no claim with regard to the capture of Jerusalem; and its silence is quite as eloquent as a direct statement that Jerusalem was not captured would have been.

The Book of Kings records the death of the great enemy of Judah in these terms (II Kings xix: 36-37): "So Sennacherib King of Assyria departed, and went and returned, and dwelt at Nineveh. And it came to pass as he was worshipping in the house of Nisroch, his



FUGITIVES SWIMMING TO A FORTRESS ON INFLATED SKINS

god, that Adrammelech and Sharezer his sons smote him with the sword; and they escaped into the land of Armenia. And Esar-haddon, his son, reigned in his stead." Placed as it is immediately after the story of his disaster, this would lead us to suppose that the assassination took place immediately after his return from Palestine.

"BY THE RIVERS OF BABYLON"

As a matter of fact, however, something like twenty years elapsed between the one event and the other; and in the interval Sennacherib had fought many battles and made many conquests. Once more, like Sargon, he had conquered Babylon, and had utterly destroyed that ancient city, turning the waters of a canal across its site: while it was he who really made Nineveh the focus of Assyrian power, and so identified it with the fortunes of the nation that to name Assyria is to bring up the thought of Nineveh.

He left Nineveh, indeed, "that great city." The circuit of its massive walls was about seven miles, while outside the walls of the fortress-town itself the city suburbs stretched far into the country. The walls themselves were 100 feet high and averaged 50 feet in thickness, while at the gates this was doubled. Eighteen mountain streams poured their waters into the town, insuring a constant supply.

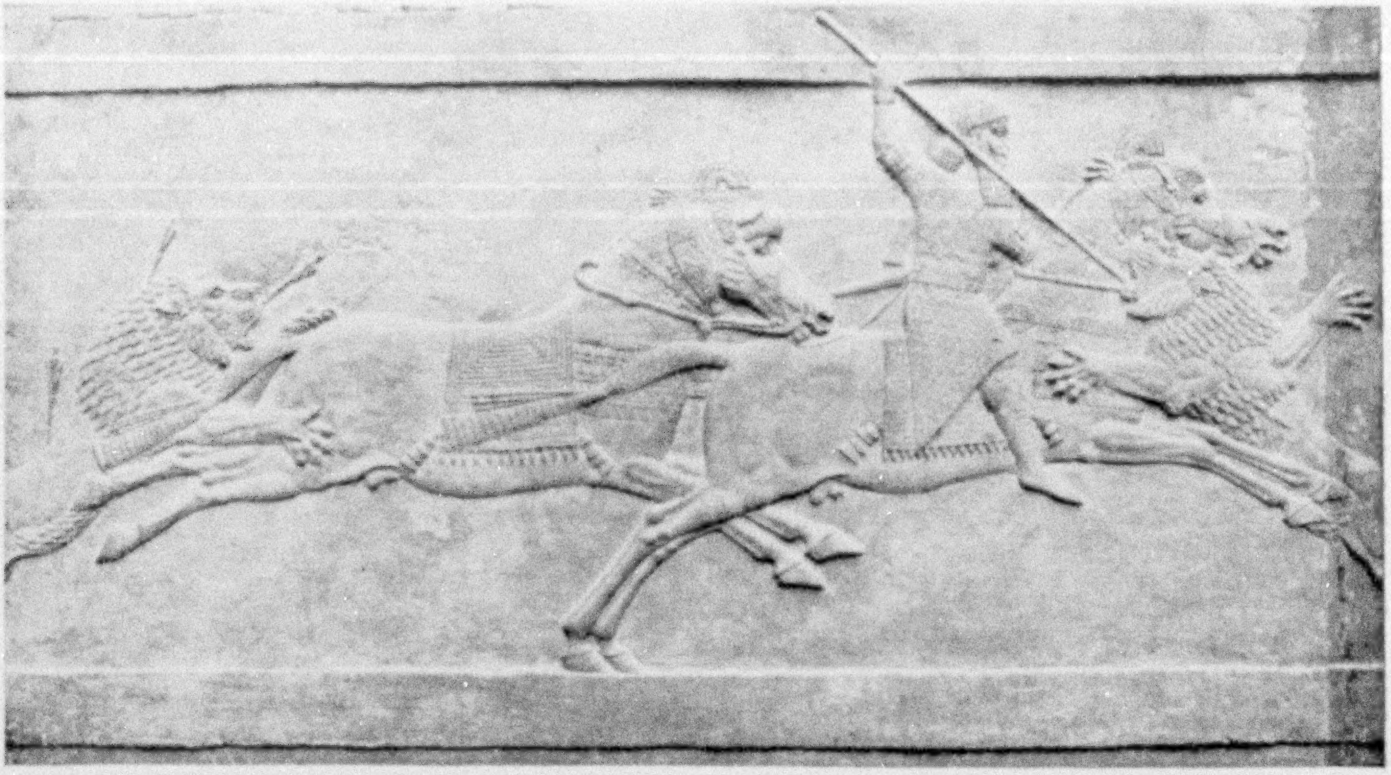
Even today the palace of Nineveh has only been partially explored; but the 71 rooms which have been excavated show that Sennacherib's splendid home was the greatest of all Assyrian palaces, while the artistic excellence of the wall sculptures is remarkable. All this greatness came, however, to a disastrous end in 681 B. C., when, like so many Assyrian monarchs, Sennacherib fell before the sword of the assassin.

King Ashurbanipal twenty years later made an end of Egypt's pretensions to rivalry with Assyria. Even Thebes, the great sacred city of the land, never before violated by the tread of foreign foes, fell before the irresistible Assyrian army, and Ashurbanipal and his troops returned in triumph "with full hands," as he says, to Nineveh.

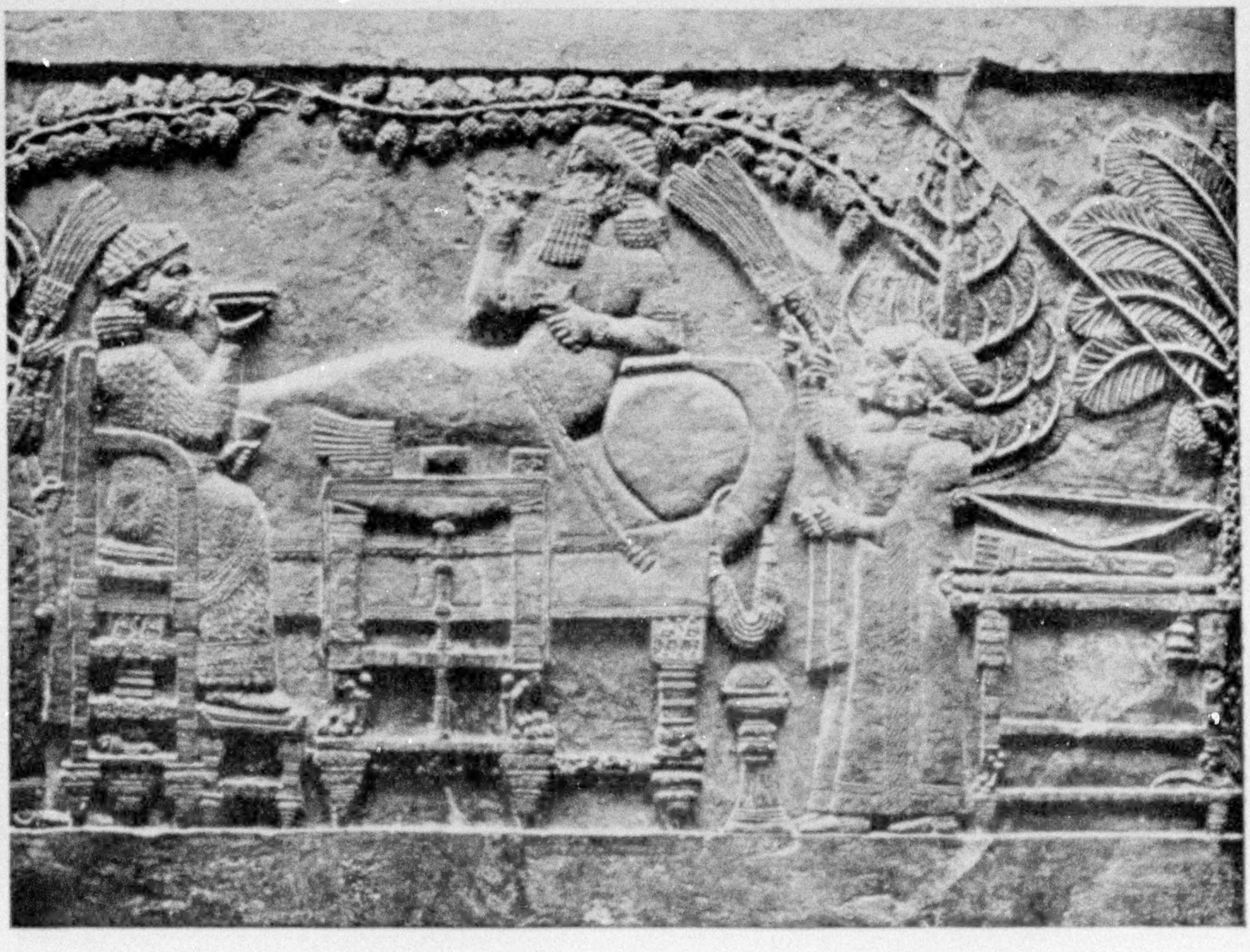
THE FALL OF THEBES

The fall of Thebes made a profound impression upon the ancient world. Egypt's ancient fame had cast a glamour upon men's minds, which still obsessed them long after her real power had passed away. Nobody believed that she could ever be actually conquered, and when the impossible happened, and Thebes fell before the Assyrians, the whole world was amazed.

You catch the reflection of the general astonishment in the words of the prophet Nahum (iii: 8). Prophesying the fall of Nineveh, he compares her with Thebes, which had so lately fallen. "Art thou better," he says, "than No-Amon (Thebes), that was situate among the rivers, that had the waters round about it, whose rampart was the sea, and her wall was from the sea? Ethiopia and Egypt were

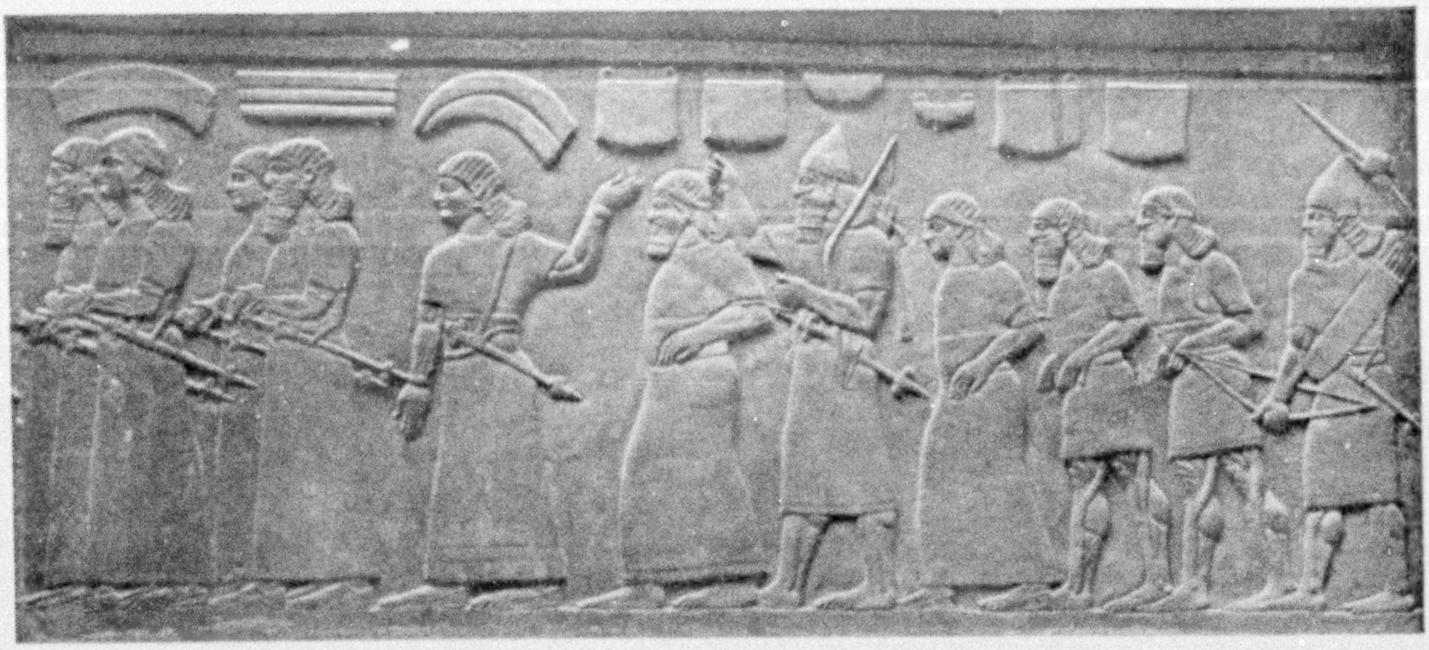


ASHURBANIPAL ON HORSEBACK SPEARING A LION WHILE ANOTHER LION ATTACKS THE HORSE WHICH THE KING LEADS



ASHURBANIPAL AND HIS QUEEN ENJOYING A CUP OF WINE

Ashurbanipal was a sort of a Napoleon of the ancient world—a warrior who took pride in his service to literature and art (see page 155)



TRIBUTE AND CAPTIVES

her strength and it was infinite. Put and Lubim were thy helpers. Yet was she carried away, she went into captivity; her young children also were dashed in pieces at the top of all the streets; and they cast lots for her honorable men, and all her great men were bound in chains."

Such was the miserable fate of the greatest of ancient capitals in those cruel days. Such before long was to be the fate of Nineveh herself.

FROM WAR TO WAR

From slaughter in Egypt Ashurbanipal turned cheerfully to slaughter in Babylonia. A great war arose with the old enemy Elam, and, in a fierce battle at Tulliz, the Elamite King Teumman was beaten and slain.

The famous reliefs representing the principal events of the battle give us the clearest possible pictures of Assyrian warfare, with all its ghastly cruelty. We see the stress of the conflict—the Elamite King making his final despairing stand and shooting his last arrow against his triumphant foes.

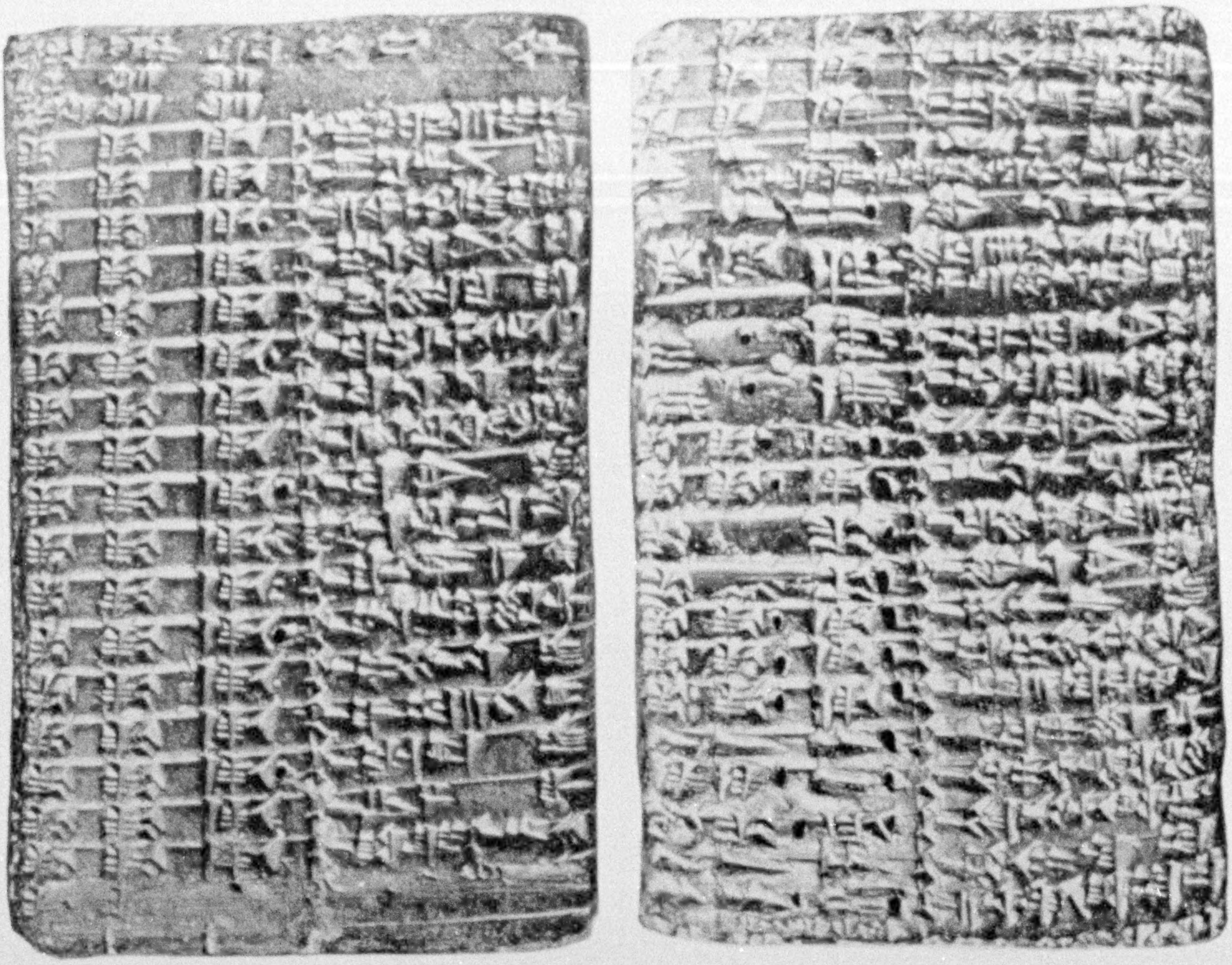
Then follows all the brutal savagery of victory. The King's head is hacked off with a dagger and borne in triumph before his conquerors. And then we have a picture of Ashurbanipal feasting with his wife and attendants in the garden of his palace, while from a tree before him hangs the ghastly head of the dead Elamite King, blackening in the sun. Such was an Assyrian conqueror and such were his pleasures.

Yet withal Ashurbanipal was one of the most enlightened of Assyrian monarchs. He had a great taste for literature, and in this respect we owe him an infinite debt. His scribes were commanded by him to make copies of the annals of Babylonia and Assyria from the libraries of all the most important cities in the land, and it is from these copies, made on clay tablets and preserved in the library of the king's palace, that the bulk of what is known of Assyrian and Babylonian history and religion has been learned. By the year 640 B. C. his campaigns were over. Henceforth he devoted himself to a life of literature, hunting, and luxury.

A MANY-SIDED MONARCH

Of all Assyrian monarchs he was by far the most splendid. His triumphs in the chase are recorded in magnificent reliefs, which remain for all time among the artistic treasures of the human race (see pages 154 and 202); his library was the greatest of ancient days, and its very wrecks are beyond comparison precious to us (see page 167).

It was his luxury, however, that chiefly impressed the world of his time. The fame of it crystallized at last into the well-known Greek tradition of how Sardanapalus, last of the kings of Assyria, lived a life of incredible luxury and self-indulgence, and how, at last, when besieged in his palace and hopeless of relief, he closed his career by erecting a vast and priceless funeral pyre, on which he



Photograph from Prof. Albert T. Clay

PAY-ROLL OF WOMEN WHO WERE CONNECTED WITH THE TEMPLE SERVICE FOR TWO MONTHS

The first two columns record the monthly payments, in grain; the third contains the total, and the fourth the name. The holes in the second and third columns are check marks. Only what is checked off was paid, as the sum total shows (see Professor Clay's article, pages 162-216). These tablets are in the University of Pennsylvania Collection.

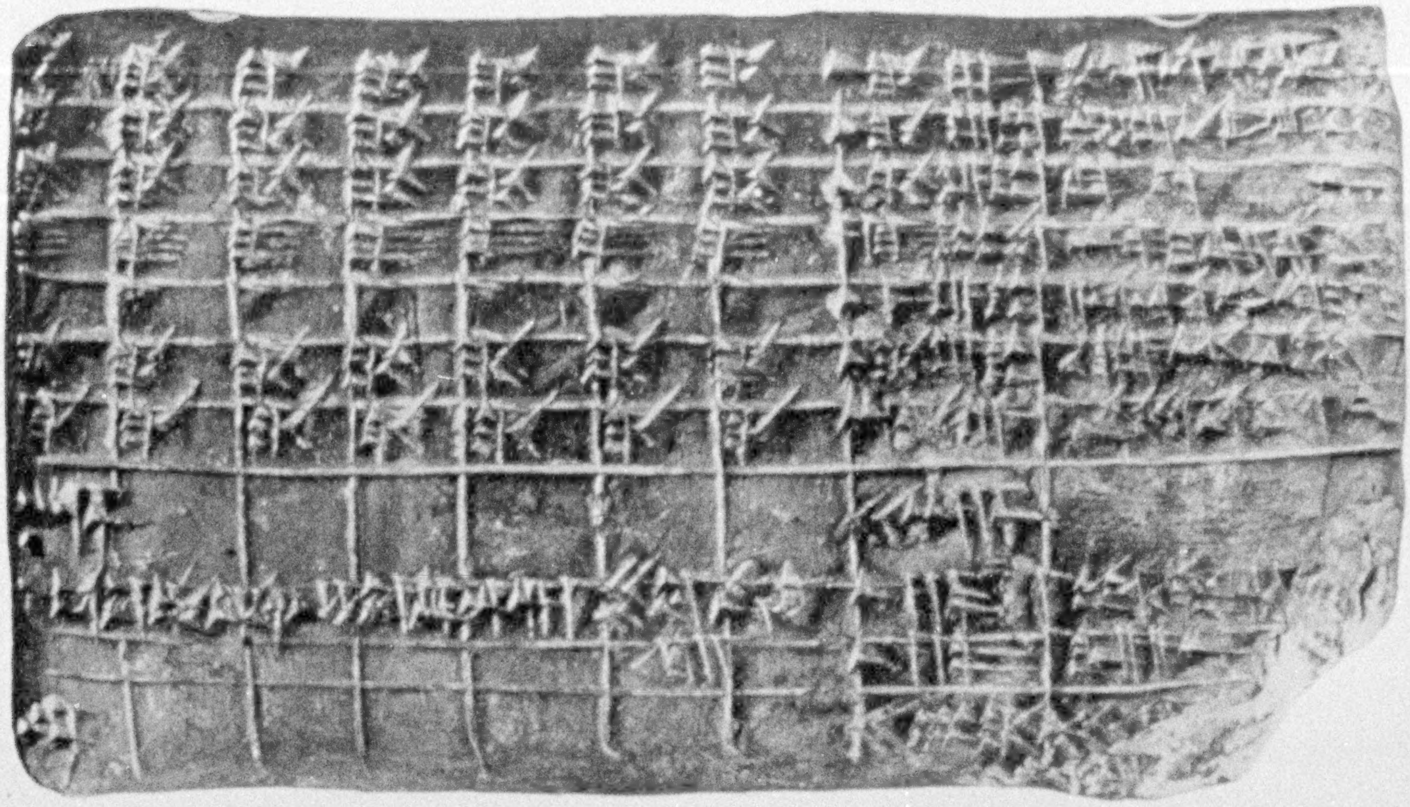
burned himself to death with all his harem and his personal attendants.

Sardanapalus is certainly meant for Ashurbanipal, seen through Greek spectacles; but he met with no such end. So far as we know, he did what few Assyrian kings managed to do—he died peacefully in his own palace. The Greek tradition has merely confused his fate with that of his second son, Sin-shar-ishkun, the last king of Assyria, who did burn himself in his palace after defeat.

All the same the reign of Ashurbanipal closes the glories of Nineveh. The great bully who had bestridden the ancient world for five centuries, slaughtering, torturing, robbing, and boasting, was now to fall, and to fall irremediably. For generations the Assyrian had boasted himself master of the world.

ISAIAH'S INDICTMENT

Isaiah has summed up his bluster and braggart spirit in a couple of verses (Isaiah x: 13, 14): "For he saith: By the strength of my hand I have done it; and by my wisdom; for I am prudent; and I have removed the bounds of the people, and have robbed their treasures, and I have put down the inhabitants like a valiant man; and my hand hath found as a nest the riches of the people; and as one gathereth eggs that are forsaken, have I gathered all the earth; and there was none that moved the wing or opened the mouth, or chirped." "Shall the axe," cries the prophet, "boast itself against him that heweth therewith?" The time had come for the axe to be broken and cast aside.



Photograph from Prof. Albert T. Clay

A WOMAN TAKING A MAN'S PLACE 3,200 YEARS AGO RECEIVED A MAN'S SALARY

This tablet gives the temple pay-roll for seven months, belonging to the fourteenth century B. C. Another, almost identical, was found written two years later. Three changes had taken place—one man's salary was raised, that of another was reduced, and a woman had taken a man's position, receiving the same salary that he had enjoyed.

Babylon, once the greatest city of the East, now for long trodden under the heel of Assyria, was stirring for her brief renaissance under a new dynasty. Her king, Nabopolassar, allied himself with Cyaxares, king of the Median highlanders, who were now descending from their mountains eager for conquest. Sin-sharishkun and his Assyrians were hopelessly defeated in the field, and after a desperate defense of Nineveh, lasting two years, the last Assyrian king shut himself up in his palace, with his wives and children, and perished in its blazing ruins.

The whole world held its breath for awhile. The news seemed too good to be true; and then everywhere one universal pæan of joy went up from the nations.

BABYLON'S TRIUMPH OVER EGYPT

Then Nabopolassar sent against the Egyptians his son Nebuchadrezzar, better known to us as *Nebuchadnezzar, the last outstanding specimen of the great race of fierce and ruthless soldiers* that this land produced.

Jeremiah has left a most vivid picture of the beaten Egyptian army streaming down in rout through Palestine. "Go up," he cries (xlvi: 11, 12), "into Gilead and take balm, O virgin daughter of Egypt; in vain shalt thou use many medicines; for thou shalt not be cured. The nations have heard of thy shame, and thy cry hath filled the land; for the mighty man hath stumbled against the mighty, and they are fallen both together."

JERUSALEM'S SURRENDER

Shortly after his great victory Nebuchadnezzar succeeded his father as king in Babylon. Jehoiakim of Judah became his vassal, but rebelled after three years. He died before the punishment of his folly had come upon the land, and when Nebuchadnezzar appeared before Jerusalem, his successor Jehoiachin surrendered himself to save his people.

Nebuchadnezzar deported him and 10,000 of the chief people of the land. Finally, the last king of Judah, Zedekiah, after almost nine years of his reign had passed, tempted, as of old, by the vain promises of the Egyptian Pharaoh Haa-ab-ra (Hophra); did the most insane act he could, by breaking faith with the great King of Babylon.

Of course it was sheer madness, and

XUM

could have but one end. The Babylonian army surrounded Jerusalem, and after a desperate defense of 18 months the Holy City was taken (586 B. C.) (II Kings xxv, II Chronicles xxxvi, Jeremiah xxxix). Nebuchadnezzar was not quite so cruel as an Assyrian conqueror would have been, but he was cruel enough. He slew Zedekiah's sons before their father's eyes, and then blinded the vanquished king, that so his last earthly sight might be one of horror; then he swept him and the majority of the important people still remaining in the land into captivity. Thus miserably ended the rule of the House of David, having endured for about 414 years (1000-586 B. C.).

Nebuchadnezzar is always associated in our minds with the splendor of his great city, Babylon. "Is not this great Babylon which I have built?" And indeed he deserves such an association; and if ever a man had cause for pride as he surveyed the work of his hands, Nebuchadnezzar was that man as he looked abroad on Babylon. Great she had always been, reverenced as the mother city, and the source of learning and law even by her Assyrian conquerors in the day of her humiliation. But Nebuchadnezzar and his father had found her as the Assyrians had left her—powerless, humiliated, and sunk.

He raised her, within a generation, to far more than her ancient splendor—to a magnificence indeed which beggared description; so that even Rome, wonderful as its spell has been, has never been able to oust Babylon from the mind and imagination of the human race as the typical world-city, the emblem of all that is magnificent and luxurious and central. Ancient historians can find no words to describe the grandeur of the palaces, the temples, the hanging gardens of the great city by the Euphrates.

NEBUCHADNEZZAR A MAN OF PEACE

Great soldier as Nebuchadnezzar was, he was really by nature and instinct a man of peace, not of the merciless and unprofitable Assyrian type at all. "He was, in truth, a son of Babylonia, not of Assyria; a man of peace, not of war; a devotee of religion and culture, not of organization and administration," so says Goodspeed ("History of the Babylonians and Assyrians").

The same high authority remarks that "the picture of him in the Book of Daniel is, in not a few respects, strikingly accurate. His inscriptions reveal a loftiness of religious sentiment unequaled in the royal literature of the Oriental world." There can be no question of the dignity and reverence of some of the prayers used, or sanctioned for use, by the great king.

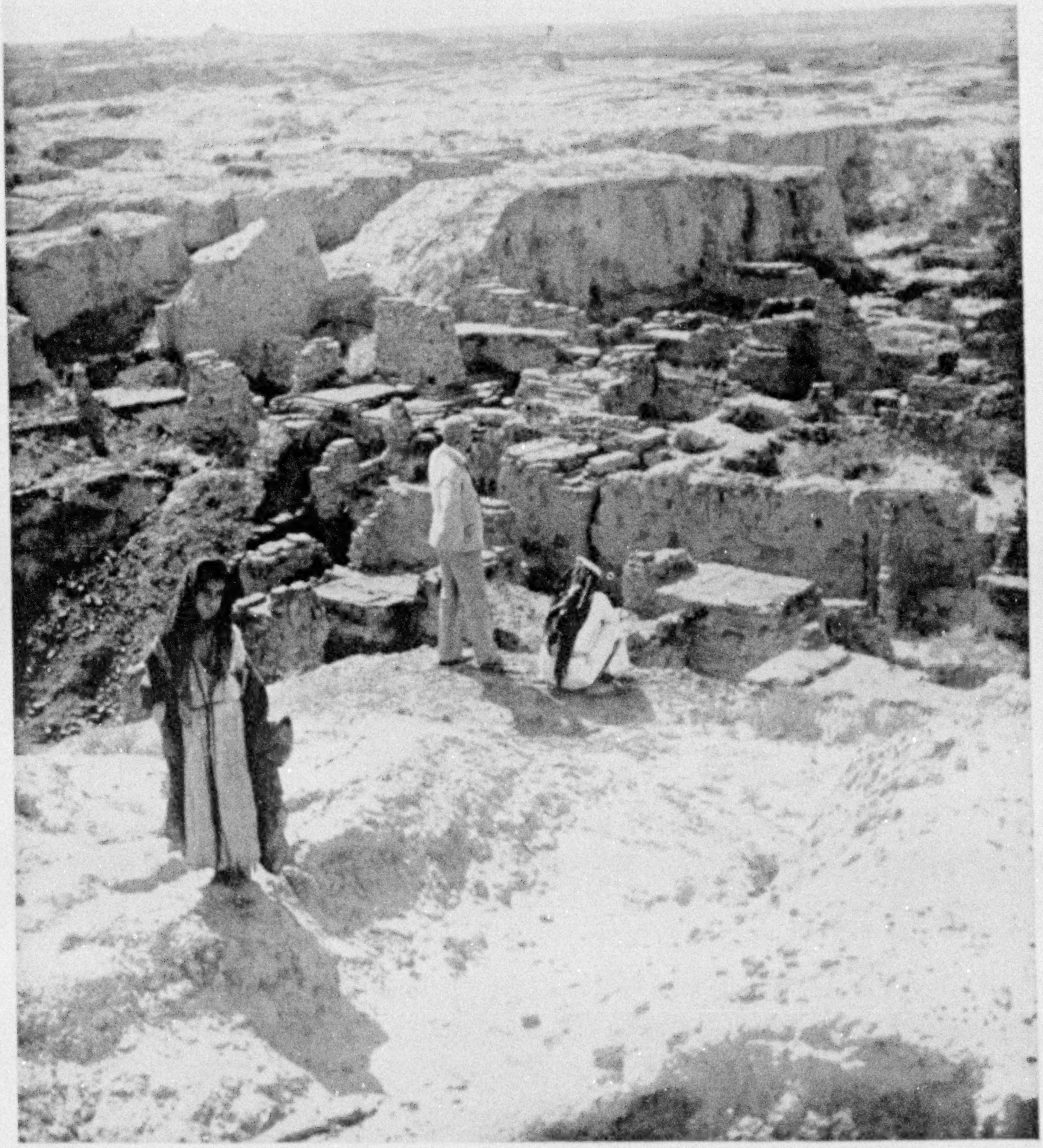
> O eternal prince! Lord of all being!
> As for the king whom thou lovest, and
> Whose name thou has proclaimed
> As was pleasing to thee,
> Do thou lead aright his life,
> Guide him in a straight path.
> I am the prince obedient to thee,
> The creature of thy hand;
> Thou hast created me, and
> With dominion over all people
> Thou hast intrusted me.
> According to thy grace, O Lord,
> Which thou dost bestow on all people,
> Cause me to love thy supreme dominion,
> And create in my heart
> The worship of thy godhead,
> And grant whatever is pleasing to thee
> Because thou hast fashioned my life.

Such a prayer is worthy to have come from the lips of him whom the Book of Daniel represents as saying: "Now I Nebuchadnezzar praise and extol and honour the King of Heaven; for all His works are truth, and His ways righteousness; and those that walk in pride He is able to abase" (iv: 37).

A SHORT-LIVED RENAISSANCE

Wonderful as was this renaissance of ancient Babylon under Nebuchadnezzar, it was destined to be a short-lived splendor. The great king was succeeded by weaklings, and a great new power, that of the Persians under Cyrus, was rising in the north. Nabuna'id, the last King of Babylon, was the most pious of monarchs, serving his gods with unexampled devotion.

In this respect we owe him no small debt; for it is his inscriptions on his restorations of ancient temples that have enabled modern scholars to arrive at approximate dates for the earlier Babylonian kings. What was wanted for Babylon then, however, was not a pious dilet-



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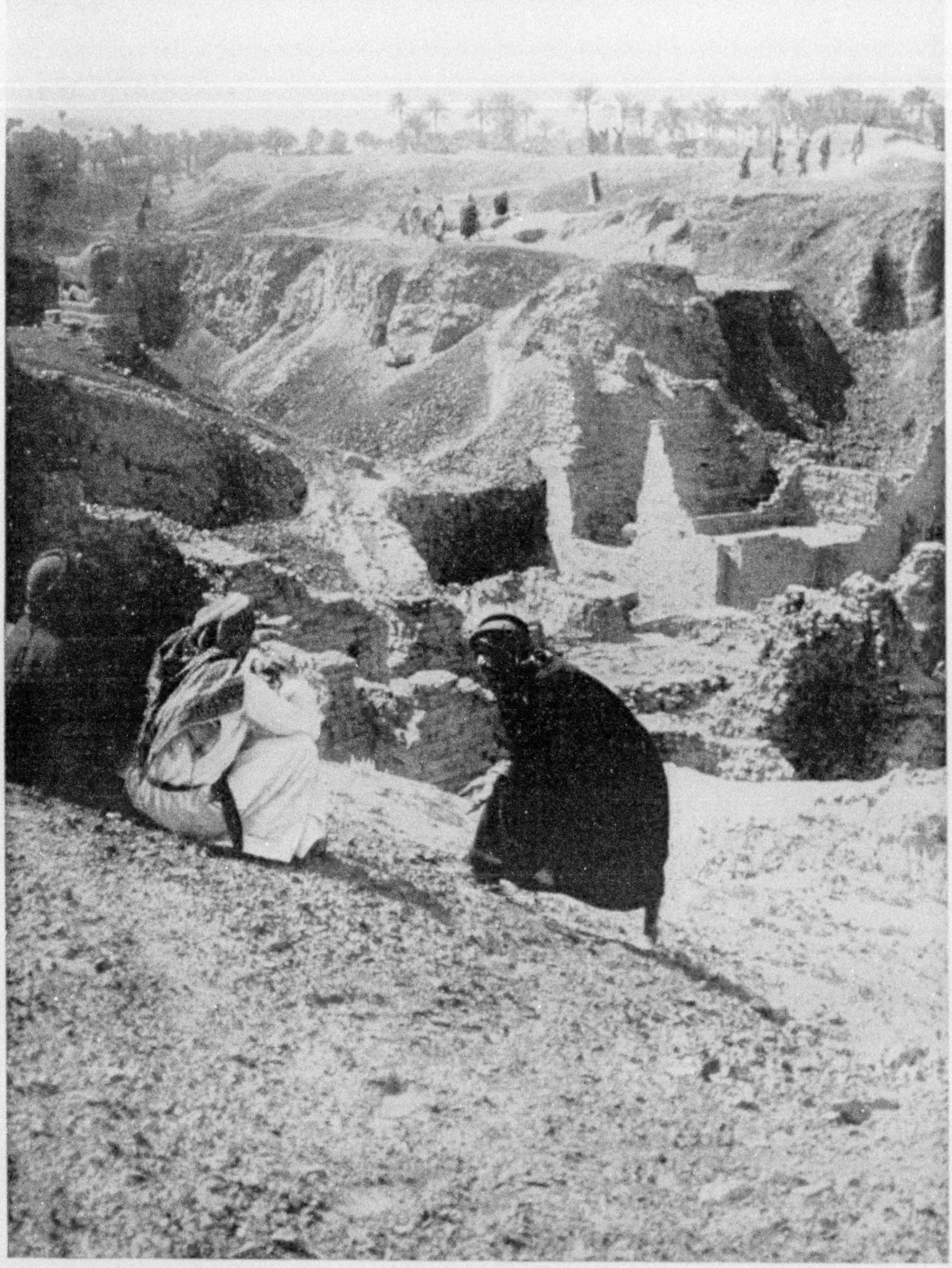
A PART OF THE CITY OF BABYLON WHICH HAS BEEN EXCAVATED CONTRASTED WITH A PART OF THE CITY THAT IS STILL COVERED WITH A GREAT ACCUMULATION OF DEBRIS

The deep, steep sides of the excavation show the immense amount of earth that was removed before these old dwellings were uncovered. (Contrast with the picture on page 195.)

XUM



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EXCAVATED HOMES OF NEBUCHADNEZZAR AND NEBOPALASSER IN BABYLON

The sphynx and the palm trees tell something of the story of the beauties of Babylon in ancient days—the one of magnificent sculpture and architecture and the other of landscape gardening at its best (see page 158).

tante, but a great soldier, and such a man she could not show.

When Cyrus with his Persians and Medes invaded Babylonia, Nabuna'id sent against them his son Belshar-utsur—the Belshazzar of the Book of Daniel. There is still extant a cylinder of Nabuna'id inscribed with a prayer to the gods on behalf of the young prince.

The prayer was not heard. Belshazzar was totally defeated. Nabuna'id shut himself up in Babylon, whose mighty walls and storehouses should have withstood siege for years, probably until the strength of the army of Cyrus was broken; but there was treachery within the gates. We are all familiar with the old story of how Cyrus diverted the Euphrates, marched his troops up the dry river-bed into the town and took it by surprise on a night of feasting. That is all pure romance.

CYRUS "A MAN WITH A MISSION"

We have the actual account of Cyrus's triumph, written by the hands of the men who in all probability were responsible for it—the treacherous priests of Marduk, the great god of Babylon. The relative part of the Cylinder of Cyrus runs thus: "Cyrus, King of Anshan, he (Marduk), called by name; to sovereignty over the whole world he appointed him. . . . Marduk, the great lord, guardian of his people, looked with joy on his pious works and his upright heart; he commanded him to go to his city Babylon, and he caused him to take the road to Babylon, going by his side as a friend and companion. . . . Without skirmish or battle he permitted him to enter Babylon."

In other words, the priests of Marduk intrigued with Cyrus, inviting him to advance against Babylon at first, and on his arrival delivering the city into his hands.

Gubaru (Gobryas), general of Cyrus, marched in unopposed. Nabuna'id was taken prisoner and kindly treated. But Belshazzar was of different metal. He, with the remainder of his forces, made a last desperate stand, and was slain in the hopeless defense of a city already conquered.

It is to this last despairing effort of the Babylonian crown prince that we must probably refer the scene of Belshazzar's feast (Daniel v). Such an ending—the last wild revel before the slaughter—would be perfectly in accordance with Mesopotamian and Babylonian traditions for the fall of royalty.

"BABYLON IS FALLEN"

So ended the Neo-Babylonian empire after a brief but splendid existence. The whole period of its endurance from the fall of Nineveh to that of Babylon was only 90 years (626-536 B. C.); but if we want to realize something of how the great city of the Euphrates and its monarchs had impressed the imagination of the subject peoples, we have only to turn to the fourteenth chapter of Isaiah, where, in one of the most wonderful pieces of taunting poetry in the literature of any land, Isaiah, himself in all probability a spectator of the fall of Babylon, records his thoughts and emotions at the ruin of the queen of cities and her king:

"Hell from beneath is moved for thee, to meet thee at thy coming; it stirreth up the dead for thee, even all the chief ones of the earth; it hath raised up from their thrones all the kings of the nations. All they shall speak and say unto thee: 'Art thou also become weak as we? Art thou become like unto us?'

"Thy pomp is brought down to the grave, and the noise of thy viols; the worm is spread under thee, and the worms cover thee. How art thou fallen from heaven, O Lucifer, son of the morning! How art thou cut down to the ground which didst weaken the nations. For thou hast said in thine heart: 'I will ascend into heaven; I will exalt my throne above the stars of God; I will also sit upon the mount of the congregation in the sides of the north; I will ascend above the heights of the clouds; I will be like the Most High.' Yet thou shall be brought down to hell, to the sides of the pit."

Photograph from Frederick Simpich

A THRONG OF PILGRIMS ON THE DESERT OUTSIDE OF BAGDAD PREPARING TO JOIN THE CARAVAN OF PILGRIMS FOR KERBELA AND NEDJEF

Before man came the land was waste. When he had learned to bridle its rivers and to develop its capabilities, it became "as the garden of the Lord." Now that he has lost the grip of his first inheritance, it has gone back to waste again. Yet there can be no doubt that here is a country of almost infinite possibilities, and that in the future, possibly not a very distant future, the first home of the race will again be one of the most fertile and perhaps one of the busiest spots in the world.

PUSHING BACK HISTORY'S HORIZON

How the Pick and Shovel Are Revealing Civilizations That Were Ancient When Israel Was Young

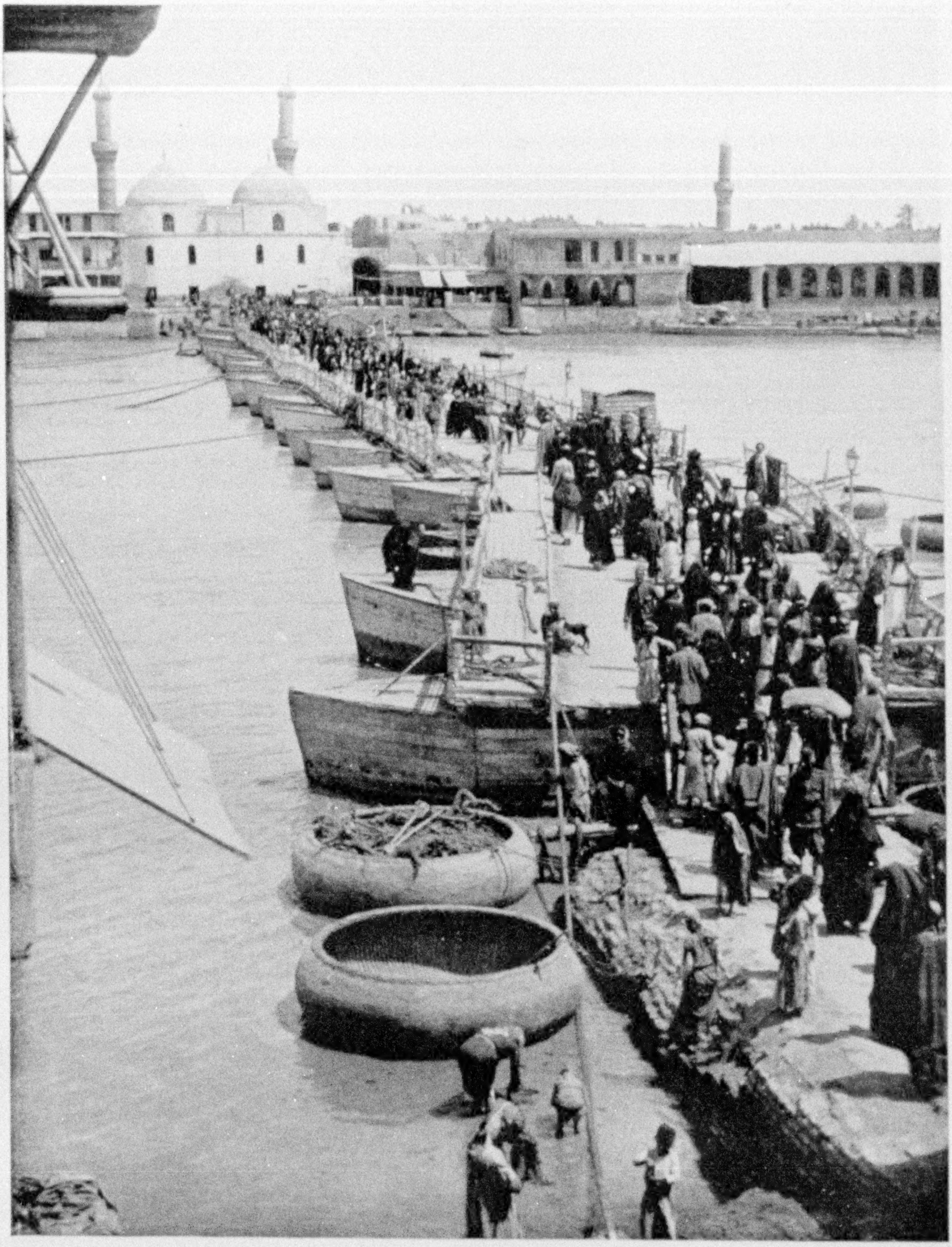
By Albert T. Clay

Professor of Assyriology and Babylonian Literature, Yale University

ONE of the romances of the last 75 years has been the unearthing of the remains of forgotten empires and the decipherment of their ancient records. A little over a half a century ago what was known concerning the ancient peoples of the nearer East, besides that which is contained in the Old Testament, could be written in a very brief form.

Israel was then regarded as one of the great nations of antiquity. Abraham belonged to the dawn of civilization. The references to other peoples in the Old Testament had little meaning, for few appreciated the fact that the history of many pre-Israelitish nations had practically faded from the knowledge of man.

The pick and spade of the explorer, however, and the patient toil of the de-



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THE PONTOON BRIDGE ACROSS THE TIGRIS RIVER AT BAGDAD

The circular boats, tied to the bridge, are like those which, 2,000 years ago, Herodotus described as being used on the river. "The boats which come down the river to Babylon are circular and made of skins. The frames, which are of willow, are cut in the country of the Armenians above Assyria, and on these, which serve for hulls, a covering of skins is stretched outside, and thus the boats are made, without either stem or stern, quite round, like a shield. They are then entirely filled with straw, and their cargo is put on board, after which they are suffered to float down the stream. Their chief freight is wine, stored in casks made of the wood of the palm tree. They are managed by two men, who stand upright in them, each plying an oar, one pulling and the other pushing. The boats are of various sizes, some larger, some smaller; the biggest reach as high as 5,000 talents' burthen. Each vessel has a live ass on board; those of larger size have more than one."

Photograph from Frederick Simpich

A GONDOLA POLED THROUGH THE SHALLOW CANALS THAT WATER THE GREAT DATE GARDENS: BAGDAD

cipherer have thrown a flood of light upon the situation; ruin-hills of the past have been opened up to the light of day, out of which emerge marvelous revelations in the form of written records and other remains.

ASTOUNDING REVELATIONS

These, although written in languages and scripts the very existence of which was unknown to man for two thousand years and more, are now forced to reveal their story of the religion, politics, science, and life of not a few of the ancient and forgotten peoples.

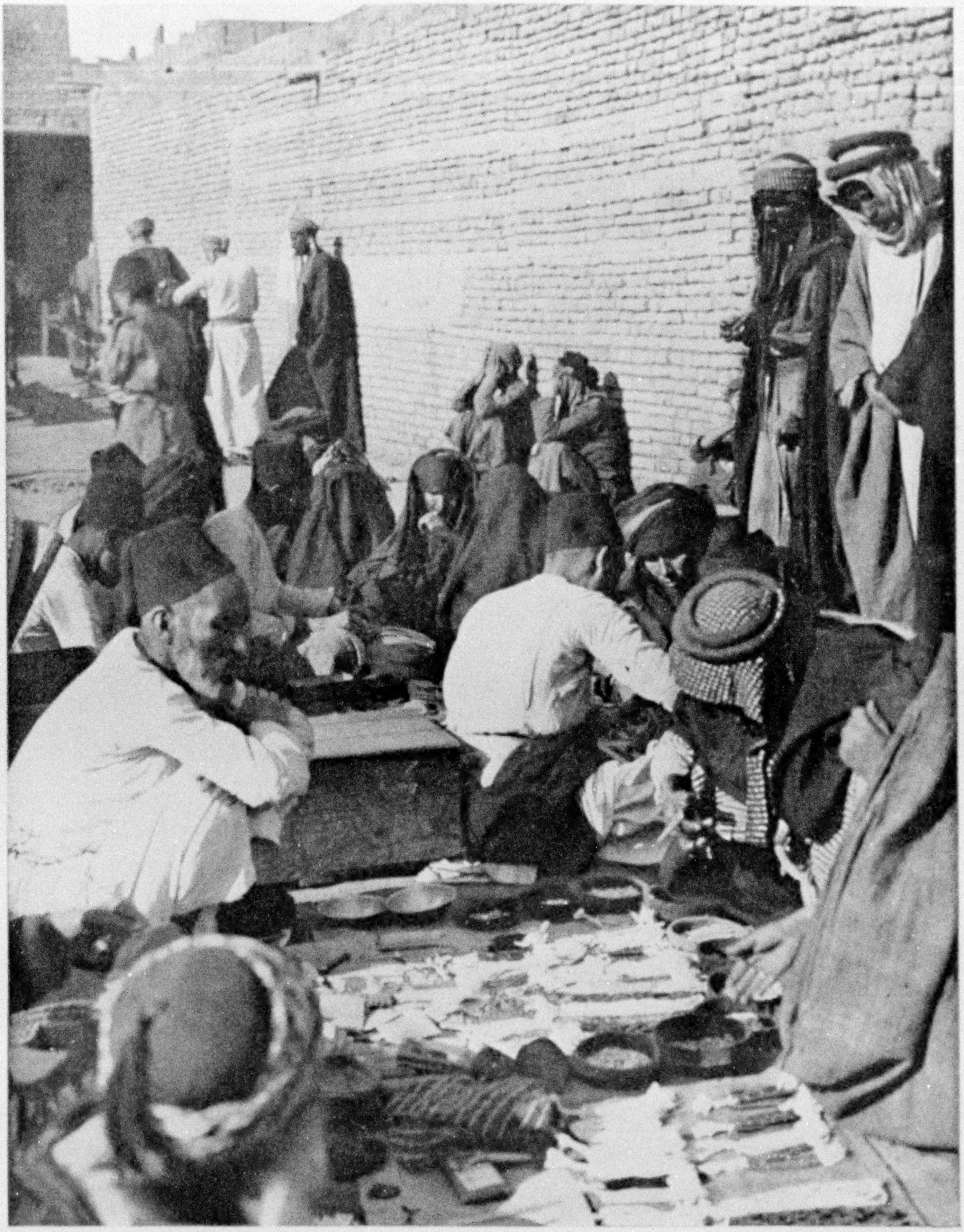
These researches have resulted in astounding revelations. Israel, instead of being one of the foremost nations of antiquity, is now found to have been a small power which had thrived in the late pre-Christian centuries, and had occupied a comparatively insignificant position among the great nations of its age. Instead of the patriarch Abraham belonging to the beginning of time, it is now found that he occupies a middle chapter in the history of mankind.

But, above all else, one of the greatest surprises is that the earliest peoples, instead of being barbarous or uncultured, were civilized and possessed a culture of a high order. In fact, the greatest creations of the Babylonians in literature and art belong to the third and fourth, and perhaps earlier, millenniums before Christ.

Political and religious institutions were already ancient in the days of the patriarchs. What may be regarded as primitive is found, but it points to a still greater antiquity than the earliest periods now known.

IMPERISHABLE RECORDS

Not only did the builders use brick instead of stone at Babel, but they also used clay for their writing material. Annual inundations deposited sand and clay of a fine quality in the valley, which was used for this purpose. The well-kneaded, but unbaked, inscription, lying perchance beneath the disintegrated abodes of the ruined building, though yearly and for millenniums saturated thoroughly by the winter rains or inundations, when carefully extracted from its resting place of



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JEWISH FAMILIES OF THE WELL-TO-DO AT THE WHARF: BAGDAD

This city, which was the scene of the Arabian Nights, is only 100 miles from ancient Babylon. There has been a considerable town here for 4,000 years; compared to it London is as of yesterday.

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from two to six thousand years and allowed to dry, often appears as if it had been written yesterday. The original plasticity or adhesiveness of the sun-dried tablet returns, and if properly preserved will last indefinitely. The baked tablets, as would be naturally expected, on the whole are better preserved.

The well-kneaded clay, which had been washed to free it from grit and sand, while in a plastic condition was shaped into the form and size desired. As the style of paper used at the present time is frequently an indication of the character of the writing, the same is true, in a general way, of an ancient Babylonian clay tablet or cylinder. In most instances the trained Assyriologist at a glance can determine the character, in a general way, of an inscription by its shape or appearance.

The stylus, which was made of metal or wood, was a very simple affair. In the early periods it was triangular and in the later quadrangular. By holding it beneath the hand between the thumb and second finger, with the index finger on top, and pressing the corner of it into the soft clay, the impression made will be that of a wedge; hence the term cuneiform (from the Latin *cunues*) writing.

The cuneiform script, written upon clay, was employed by many different peoples of western Asia.

EARLIEST KNOWN RECORDS

The date of the earliest known inscription is still undetermined. The chronology prior to 2400 B. C. is still in a chaotic state and yet the recent discovery of a tablet giving several new dynasties, besides many other facts which have been ascertained, offer sufficient indications of a much greater antiquity for the earliest known inscriptions than have been credited them.

The illustration of the Hoffman tablet (on page 167), in the General Theological Seminary, New York city, shows one of the few known archaic inscriptions. To assign it the date 5000 B. C. would be a modest reckoning. And yet the characters are so far removed from the original pictures that in most instances it is only by the help of the values they possess that the original pictures can be surmised. This tablet, tentatively translated by Professor Barton, of Bryn Mawr, reads as follows:

> "3005 Bur of a field of clay in Ushu, of the land of the setting sun, belonging to the priest Sallaltur; 36050 cubits on its Akkadward side, the lower, from the beginning; 36050 cubits running along the breadth of the ziggurrat of Shamash, the brilliant lady; 36000 cubits to the temple of Shamash, the messenger of Ab, the brilliant; 36050 cubits on the side of the mountain, the abode of Shukura, the *pa-azag*. May he give strength; may he bless."

BRONZE AND STONE INSCRIPTIONS

While in all known periods clay was the writing material, important royal documents, votive and historical inscriptions, etc., are found on stone, and in some instances on bronze. In cutting such inscriptions the scribe imitated the characters made in clay with the stylus.

Not unlike other scripts, the cuneiform was originally pictorial; but, as in Egypt, the hieroglyphs became more and more simplified and conventionalized.

But, unlike the Egyptians, the Babylonian or Sumerian became conventionalized at a time prior to the known history of the land; and the hieroglyphs were not continued in use even for monumental purposes, but were practically lost sight of.

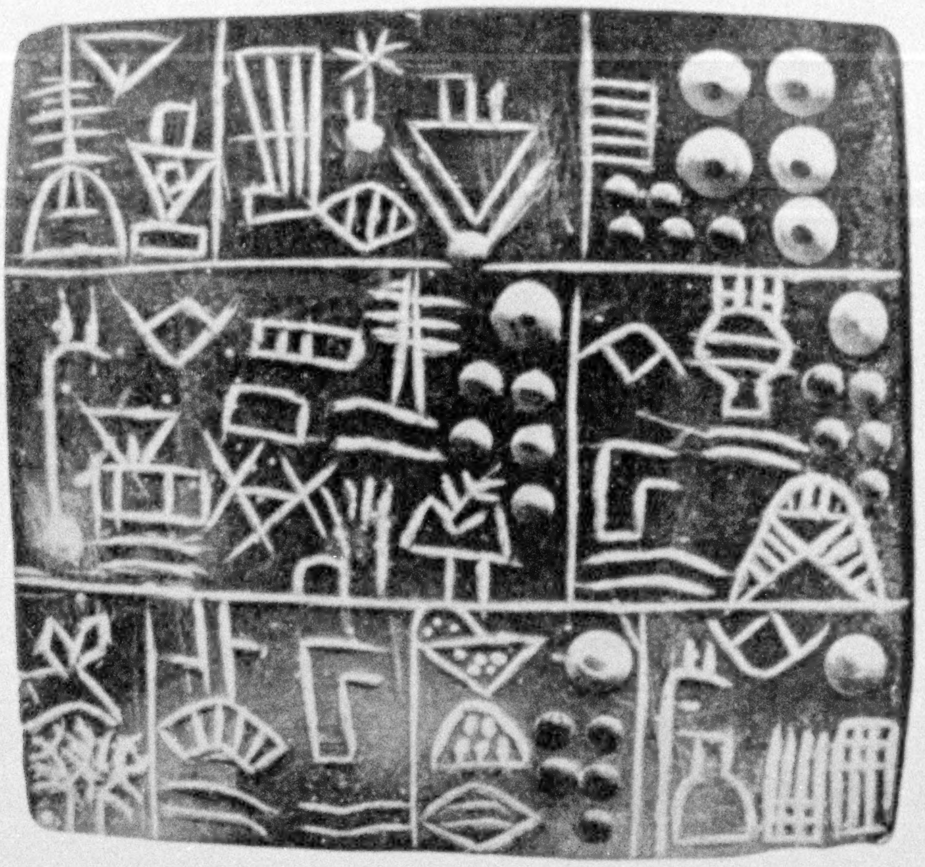
There are known over six hundred signs. Each of these has syllabic and ideographic values from one to more than a hundred. Combination of two and three signs have ideographic values, so that there are known at present twenty thousand values for the six hundred signs. Besides the characters are different in every age, due chiefly to the process of simplification that went on continually.

Practically every man of any standing in ancient Babylonia had a seal cylinder or seal, the impression of which upon the document or letter served the purpose of his signature. Thousands of these have been found, cut out of all kinds of hard stone, which had been imported from distant lands, for Babylonia is an alluvial plain.

As a substitute for a seal the individual could make his thumb-nail mark upon the soft clay, or impress upon it a portion of his *ziziktu*, which was a cord attached to an undergarment. This, in all probability, is to be identified with the *zizith* mentioned in the Old Testament (Num. 15:38, 39), and even at the present time worn by orthodox Hebrews.

BABYLONIAN "STENOGRAPHERS"

In all periods scribes are very numerous. This is inferred from the fact that in some periods almost every document is found to have been written by a different scribe. In the Assyrian period women are known to have belonged to this profession. The scribes wrote the legal documents, as well as the private letters of individuals. They even placed the seal impression upon the legal document, in proximity to which they wrote the name of the person to whom it belonged, usually the obligor or the witness.



Photograph from Prof. Albert T. Clay

A WRITTEN RECORD AT LEAST 7,000 YEARS OLD

This is the Hoffman Tablet, in the General Theological Seminary, New York City. This is one of the most ancient of all human writings. To assign it the date of 5000 B. C. would be a modest reckoning (see text, page 166).

In the time of Hammurabi (about 2000 B. C.) there was at hand an officer called the Burgul, who was prepared to cut temporary seals upon a soft material for those who did not possess them. This is the custom in Oriental lands in the present day.

In Constantinople, for instance, the curbs of certain streets are lined with scribes prepared to write for the illiterate. An occasional man among them is provided with little blank stamps in soft brass, and with an engraving tool is prepared to cut the signature or initials of the man upon one of them while he waits. The impression of the stamp is affixed to his letter in place of his signature.

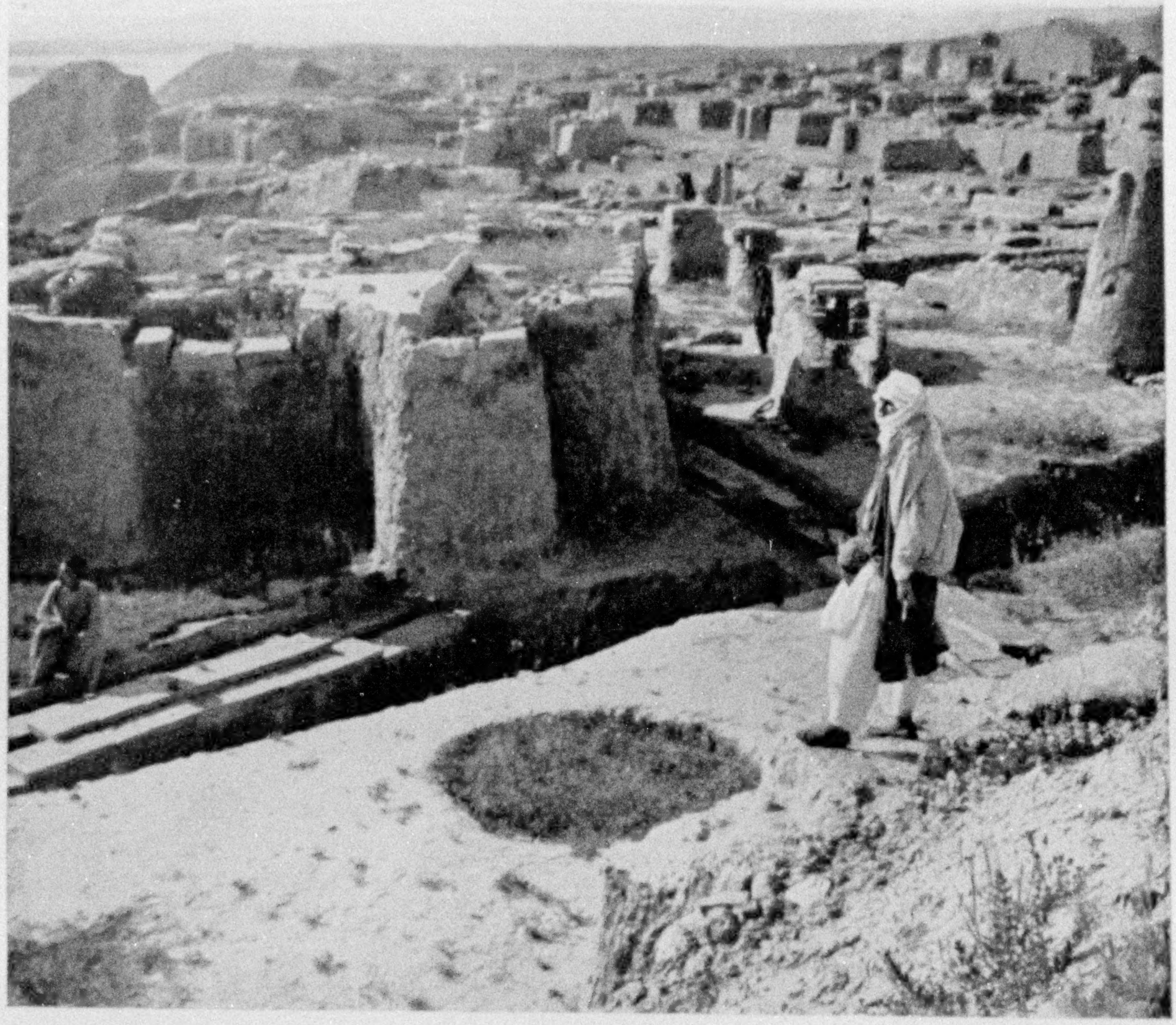
THE "CONGRESSIONAL LIBRARY" OF NINEVEH

The cuneiform inscriptions in clay, stone, and metal that now repose in museums and in private collections number hundreds of thousands.

Several ancient libraries and immense archives have been found. Years ago the literary library of Ashurbanipal (668-626 B. C.) was discovered at Nineveh. It appeared to the excavators that the library had been deposited in the upper chambers of the palace, and that when the building was destroyed they fell through to the lower floors, where they were found in masses.

The inscriptions showed that they had been arranged according to their subject in different positions in the library. Each series had a title, being composed generally of the first words of the first tablet. Usually at the end of each tablet its number in the series was given.

In the library were found epics, religious, astrological and magical texts, chronicles, paradigms, syllabaries, etc. This is the only library that has been found in Babylonia or Assyria which can be regarded as a literary library, where efforts had been made to assemble literary and other works produced at times not necessarily connected with the era to which the library belonged.



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THE EXCAVATED SITE OF ASSUR, A COLONY OF BABYLON

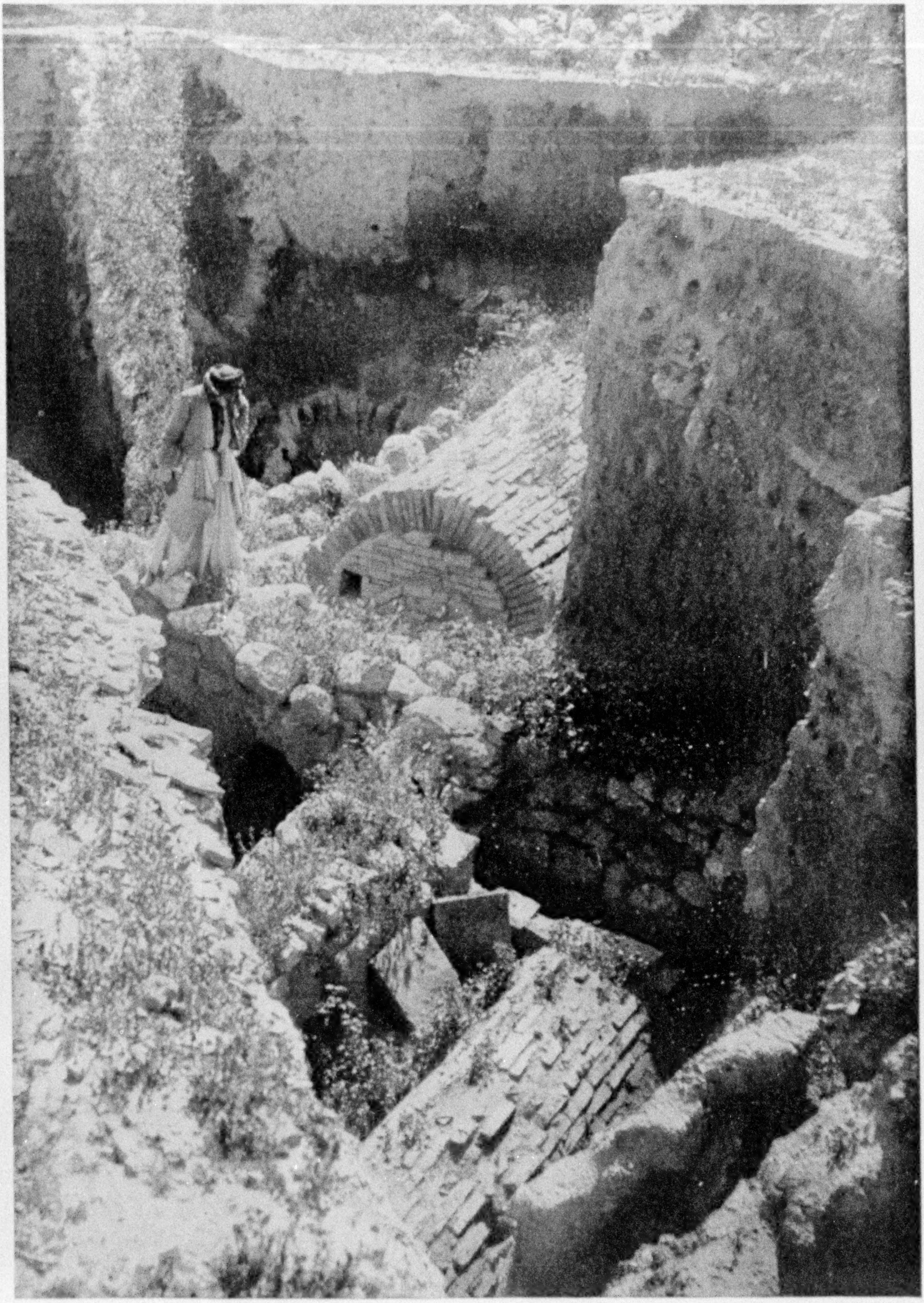
Parts of the city's walls, quays, streets, palaces, and temples have been laid bare

The scribes of Ashurbanipal searched the temples and schools of Babylonia and Assyria for these productions and rewrote them in what was then modern Assyrian (see page 155).

There are many indications of the transcription of older texts, or the handing down of them from one period to another. Not a few tablets in the Ashurbanipal library have subscriptions or colophons stating that they are copies written according to originals found in such and such a city.

Several instances of earlier versions have been found. For example, there is a version of the Gilgamesh represented in the Yale collection by a tablet, and in the Berlin Museum by a fragment which belong to a time fifteen hundred years earlier than the library of Ashurbanipal.

The same is true of the deluge story, which is represented by more ancient versions. Moreover, the one in the library of J. Pierpont Morgan, dated about 2000 B. C., clearly shows that it is a copy of a still older version. Not only is the



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ROUND-ROOFED TOMBS OF OLD ASSUR

Assur was the earliest capital of Assyria. It is therefore one of the most ancient of cities. It stood for more than 2,000 years, although long superseded as capital and trading center.

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name of the scribe who made the copy given, but where the original was defective he wrote "broken."

In more recent years temple and school libraries have been found at Nippur, Sippar, Larsa, Babylon, and Erech. The libraries of the first three sites belong chiefly to the third millennium B. C.; those of the last two belong to later periods.

They are primarily temple school libraries, and contain also the tablets used by the different priests in the temple service, as hymns, prayers or liturgies, omen or divination texts; also syllabaries or dictionaries, grammatical exercises, mathematical texts, etc. At Nippur school library material belonging to the second millennium was also found.

Besides these libraries immense archives of temple administrative documents belonging to all periods have been found in practically all sites where excavations have been conducted by the Occidental or by the illicit diggings of the Oriental.

GOVERNMENT ACCOUNTS CAREFULLY KEPT

But especially large archives of these documents, numbering several hundred thousand and belonging to the third and fourth millenniums B. C., have been found at Tello, Nippur, Drehem, Jokha, and recently at Ur.

These tablets record the payment into the temple stores of tithes or offerings of drink, vegetables, or animals, of taxes, rents, loans, and also the disbursement of this property. The temple stood in relation to the people as the State does in modern times, and these are the records of administration.

Exhaustive accounts were kept of what was received and what was disbursed. Great storehouses held the income. There were immense cattle yards, in which the property of the temple in live stock was cared for, as, for example, the one at Drehem, close by the city of Nippur.

The cattle not disposed of were intrusted to herdsmen, with whom contracts were made, setting forth their responsibilities and regulating their profits; documents referring to granaries, freight boats, messengers; to payments of temple officials; in fact, records similar to the business transactions such as are ordinarily found in the administrative offices of our present-day institutions.

Next to the temple documents, in point of numbers, come the legal and business documents of the Assyrians and Babylonians. One hundred thousand tablets of this character would be a reasonable estimate of this class of literature in the different museums and private collections, belonging to all the periods. These documents are one of the most fruitful sources of light thrown upon the everyday life of the people, not to mention the valuable historical and chronological data gathered from them.

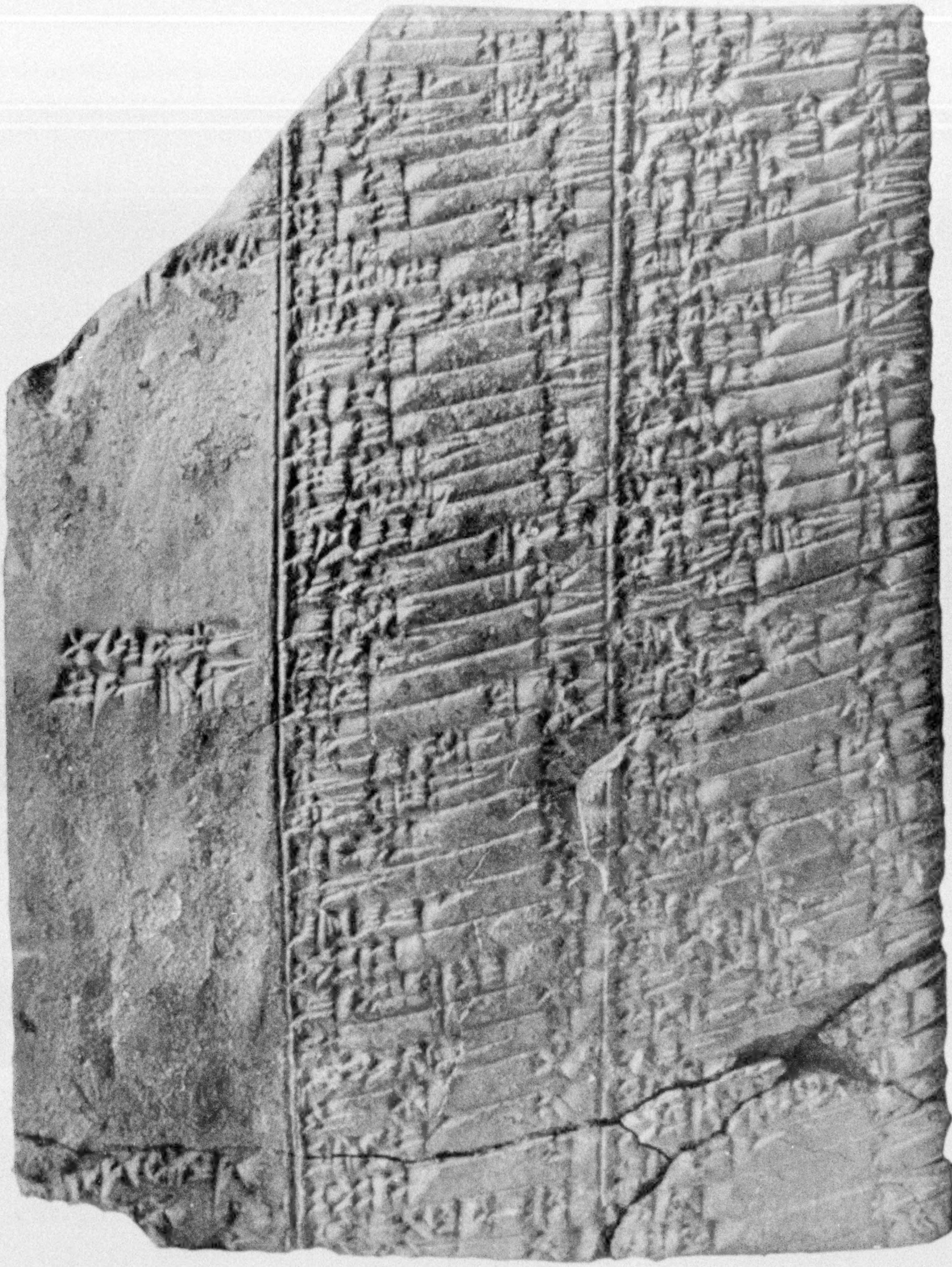
AN ANCIENT MARRIAGE CONTRACT

There are dowry and marriage contracts, partnership agreements, records of debts, promissory notes, leases of lands, houses, or slaves, deeds of transfer of all kinds of property, mortgages, documents granting the power of attorney, tablets dealing with the adoption of children, divorce, bankruptcy, inheritance; in fact, almost every imaginable kind of deed or contract is found among them. Following is an example of a marriage contract:

> "Nabû-nâdin-akhi, son of Bêl-akbê-iddin, grandson of Ardi-Nergal, spoke thus to Shum-ukina, son of Mushallimu: 'Give me thy Ina-Esagila-banat, the virgin, to wife to Uballitsu-Gula, my son.' Shum-ukina hearkened unto him, and gave Ina-Esagila-banat, his virgin daughter, to Uballitsu-Gula, his son. One mina of silver, three female slaves, Latubashinnu, Ina-silli-esabat and Taslimu, besides house furniture, with Ina-Esagila-banat, his daughter, as a marriage-portion he gave to Nabû-nâdin-akhi. Nanâ-Gishirst, the slave of Shum-ukina, in lieu of two-thirds of a mina of silver, her full price Shum-ukina gave to Nabû-nâdin-akhi out of the one mina of silver for her marriage-portion. One-third of a mina, the balance of the one mina, Shum-ukina will give Nabû-nâdin-akhi, and her marriage-portion is paid. Each took a writing (or contract)."

This is followed by the names of six witnesses, that of the scribe, and the date.

It is from the contract literature that we become familiar with the life which pulsated in the streets and the homes of the ancients who lived in Babylonia and Assyria so long ago. Through it we learn to know the personalities of the



Photograph from Prof. Albert T. Clay

A TABLET CONTAINING THE EARLIEST-KNOWN LAWS: BABYLON (SEE PAGE 175)

These laws were written in Sumerian about 4,200 years ago. It is believed that they formed the basis of the Hammurabi Code, issued in 2000 B. C., just as British laws furnished the basis of our own in our early history. This tablet is in the Yale Collection.

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people, their plans, their needs, and the things against which they guarded, which, it might be said, are the same as those familiar to us in the present day.

A TRIBUTE TO THE BABYLONIANS

Again and again are we forced to exclaim as we become acquainted with the doings of the ancients from these sources that our boasted civilization has developed very little in the essentials of life.

These documents are so numerous that we will know individuals of certain periods more intimately than we know of some of the centuries of our Christian era. When the tablets, for example, of the first dynasty of Babylon, about 2000 B. C., have been published, the history and geneaologies of many families covering several generations will be known. In the late period several old families of Babylon and Erech can be traced for centuries, notably the Egibi of Babylon and such families as Ekur-Zakur, Akhutu, etc., of Erech.

SAFEGUARDS AGAINST FORGERY

Not a few of the contracts, especially of the early period, were encased in a thin layer of clay, which served the purpose of an envelope. The contents of the document are usually duplicated on the case, which also contains the seal of the obligor. It was less difficult to alter amounts on a clay tablet than it is at present upon paper; when the document was encased and the envelope bore the seals of the obligor, and in many instances of the witnesses, the obligee, who held the document, could alter the envelope, but he could not change the tablet; for if he peeled off the case which contained the impressions of the obligor's seal he could not replace (see page 179).

The number of official and personal letters of most periods that have been found is also quite large. From the royal letters, such as those of Hammurabi to one of his governors, or those found in the library of Ashurbanipal, considerable information is gained dealing with the civil affairs in the land and with foreign affairs of other lands, especially Armenia and Elam.

The letters of Hammurabi that have been found were addressed to one of his governors, stationed at Larsa. They had been encased, and the envelope contained something like "To Sin-idinnam." On the receipt of the letter the case was peeled off. It began: "Unto Sin-idinnam, thus says Hammurabi."

His letters show that he gave personal oversight to the minor affairs of his kingdom. Special attention is devoted to the construction and dredging of canals. He superintended the collection of revenues and exercised control over the priesthood. He punished money lenders for extortion or for failing to cancel mortgages after they had been satisfied.

REGULATING THE CALENDAR

One of his letters shows how the calendar was regulated. As the Babylonians observed the lunar month, it became necessary to insert an intercalary month every third year. In a letter to Sin-idinnam, after calling attention to the fact that the year was deficient, he ordered that the month upon which they were entering should be called "Second Elul" instead of Tishri, the month that followed Elul.

But he added: "Instead of the tribute arriving in Babylon on the 25th day of Tishri, let it arrive in Babylon on the 25th day of Second Elul." That is, he pushed forward the calendar; but he was unwilling to wait a month for his revenues.

The letters of a private character throw light upon personal affairs. These deal with all the different phases of life. The father is reminded of a broken promise; his son writes him that "thou, my father, didst say that when I went to Dur-Ammi-Zaduga . . . 'I will send a sheep and five minas of silver, in a little while, to thee.'"

A tenant desires a good cow and a creditor compels his debtor to meet his obligations. A prisoner pleads with his master for deliverance, calling the jail a starvation house, and asserting that he is not a robber, but the victim of the Sutu, who fell upon him and took away the oil he was carrying across the river.

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"THE WATERS ASSUAGED": GREAT PLAINS LEFT AFTER FLOODS IN MESOPOTAMIA

Both the Babylonians and the Assyrians preserved accounts of a great deluge. The Assyrian hero of that world calamity was Gilgamesh, who corresponded to Noah in the Hebraic account of a great catastrophe which destroyed all mankind (see pages 168 and 212).

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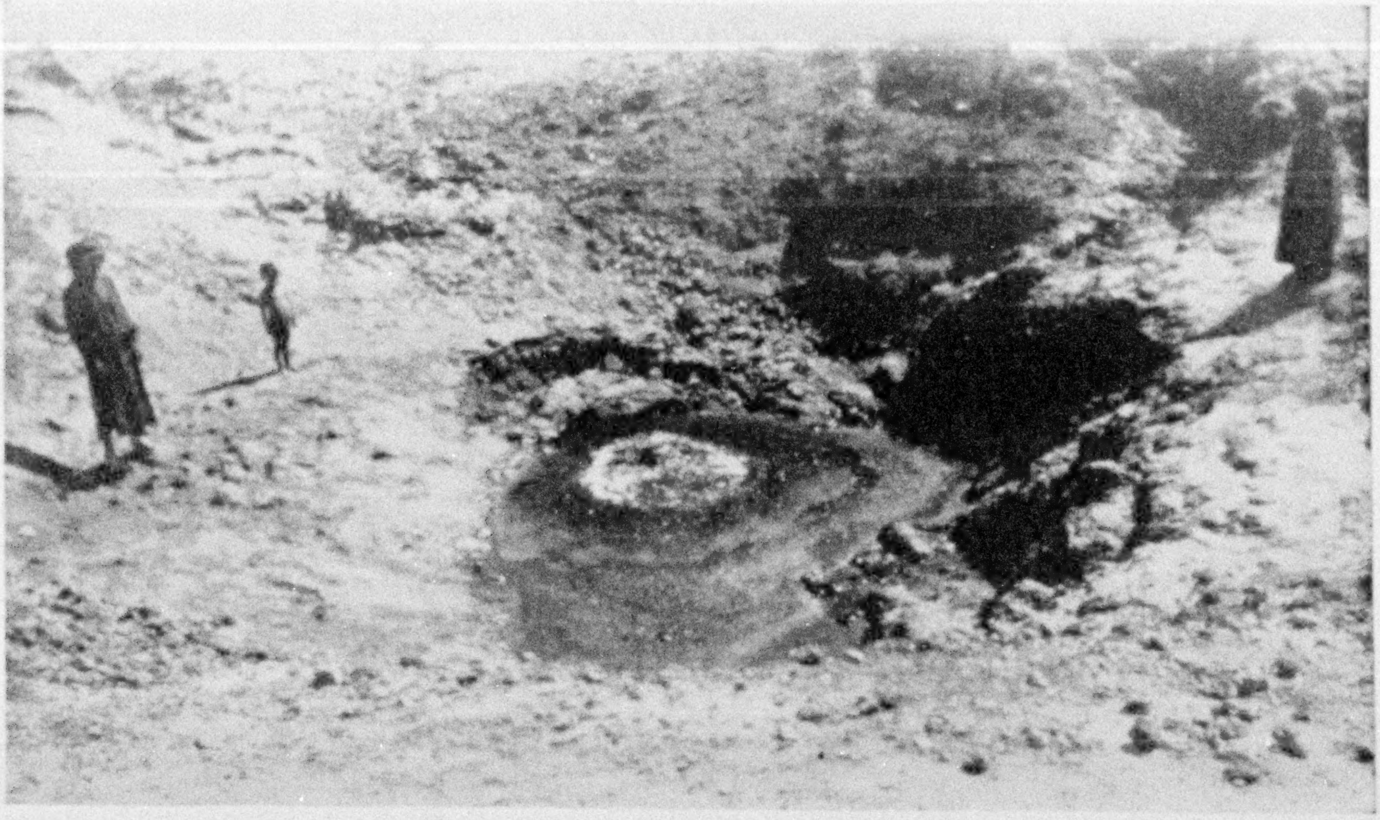
THE BURIED CITY OF NINEVEH, WHERE THE "CONGRESSIONAL LIBRARY" OF ASHURBANIPAL WAS FOUND (SEE PAGE 167)

Conditions that favor quick rise of a civilization also hasten its decay. Nebuchadnezzar informs us that half a century served to reduce a temple to a state of decay if it were left uncared for. That explains why the weathering processes have left so many cities nothing more than big mounds of crumbled clay.



Photograph from Prof. Albert T. Clay

AN ASPHALT SPRING IN MESOPOTAMIA

It is probable that it was this bitumen to which Genesis refers where it says "they had brick for stone, and slime had they for mortar"

A LOVE LETTER OF LONG AGO

A young man sends his endearing inquiry concerning the health of his beloved, saying: "To Bibea, thus says Gimil Marduk: may the gods Shamash and Marduk permit thee to live forever for my sake. I write to inquire concerning thy health. Tell me how thou art. I went to Babylon, but did not see thee. I was greatly disappointed. Send the reason for thy leaving, that I may be happy. Do come in the month Marchesvan. Keep well always for my sake."

The letters, besides being extremely valuable for rewriting the political history and the life and customs of the people, offer most important philological and lexicographical material.

Many of these also were encased, but only the address, with the seals of the sender, appear on the outside. Not a few letters have been found encased in their original envelopes—*i. e.*, they are unopened. They can only be explained as being duplicate copies retained by the sender.

The Code of Hammurabi, written about 2000 B. C., upon a large and somewhat irregular stele, is perhaps the most important monument of antiquity that has been found for a century. It is the product of a civilization of a high order. In codifying his laws, Hammurabi arranged them in a definite and logical order, based upon accepted judicial decisions (p. 141).

It is now definitely ascertained, as had been inferred, that the code is based on other codes that preceded it. In the Yale Babylonian collection there is a tablet written in Sumerian, which seems to be a prototype of the code. Although it is not dated, the script indicates that it is older than the Hammurabi Code (p. 171).

ALL CONTINGENCIES COVERED

A number of its laws bear upon subjects covered in what are known as the Sumerian family laws, but which are, nevertheless, quite distinct. Others deal with the leasing of boats and animals, even making provision, as does the Hammurabi Code, when a lion kills a hired animal. But especially interesting is the fact that there are two laws dealing with the injury of pregnant women, which have been contracted into one law that is found in the code.

It is not impossible that the code was extensively influenced from sources distinctly Semitic; perhaps Aramæan. This

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AN ARAB HOME IN BABYLONIA

is suggested by such episodes as the story of Hagar in the Old Testament, which is not in accord with the Mosaic Code, which was doubtless extensively influenced by the Amorite culture, but is similar to the Babylonian.

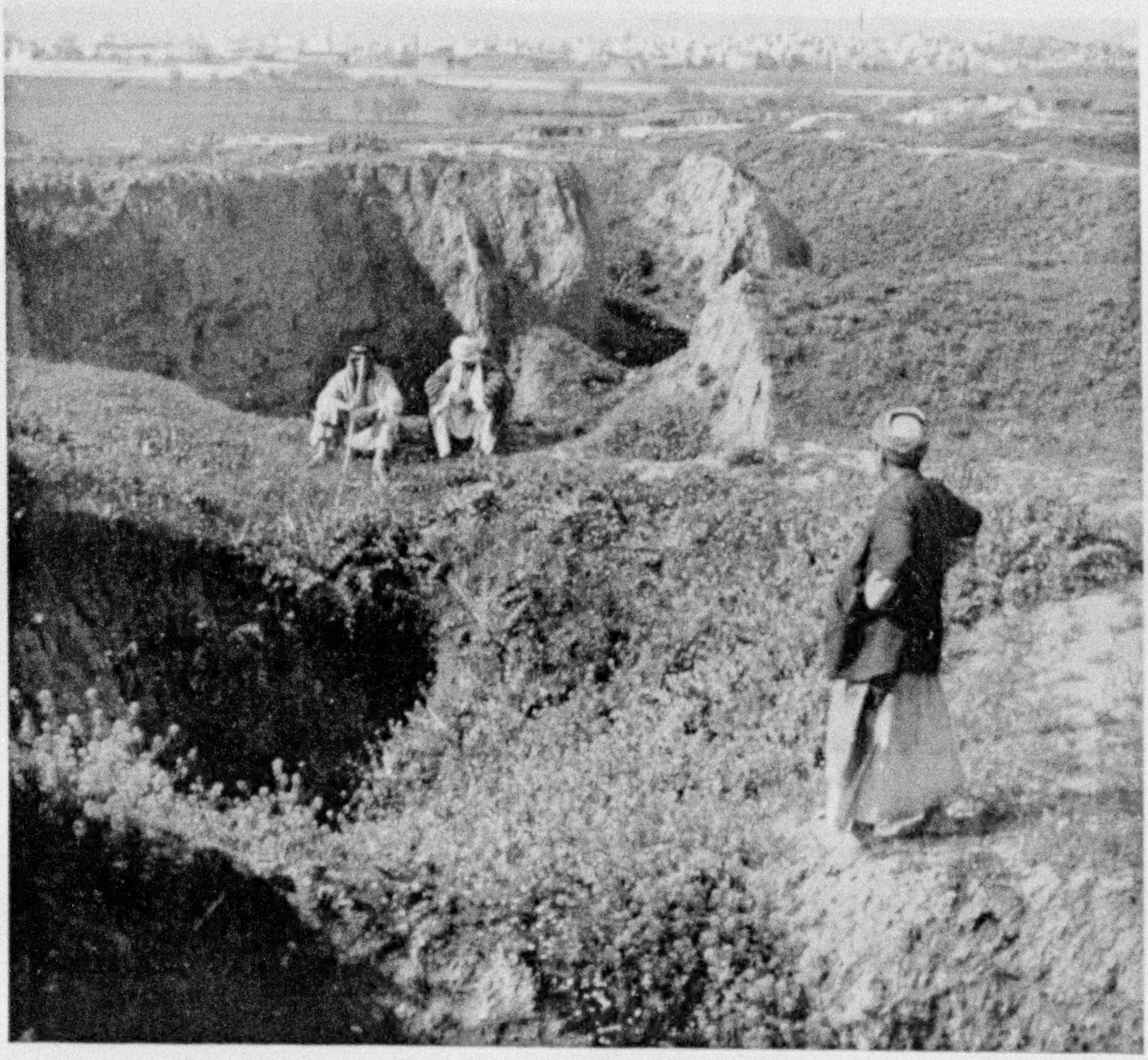
Abraham may have become acquainted with Babylonian law while sojourning in southern Babylonia, if the theory that Ur of the Chaldees is to be located in that region; but it is more probable that he learned it in Aram, his ancestral home.

On some subjects but one law is given, while upon others as many as thirty. The following brief outline will afford an idea of the subject-matter treated: Witchcraft, witnesses, judges; concerning offenses involving the purity of justice, as tampering with witnesses, jury, or judge; crimes of various sorts, as theft, receiving stolen goods, kidnaping, fugitive slaves, burglary; duties of public officers in their administration; laws relating to landlords, tenants, creditors, debtors; canal and water rights, licenses, messengers, herdsmen, gardeners, slander, family relationship, marriage, divorce, desertion, breach of promise, adultery, unchastity, concubinage; rights of women, purchase-money of brides, inheritance, adoption, responsibility for all kinds of assaults; fees of surgeons; branding of slaves, fees and responsibilities of builders and boatmen; hiring of boats; agricultural life, the purchase and punishment of slaves who repudiate their master, etc.

GRADES OF SOCIETY

In no better way is it possible to become acquainted with the every-day life of the ancient Babylonian than by a careful study of the Hammurabi Code.

The code recognizes three grades of society—the aristocrat, or gentleman, the



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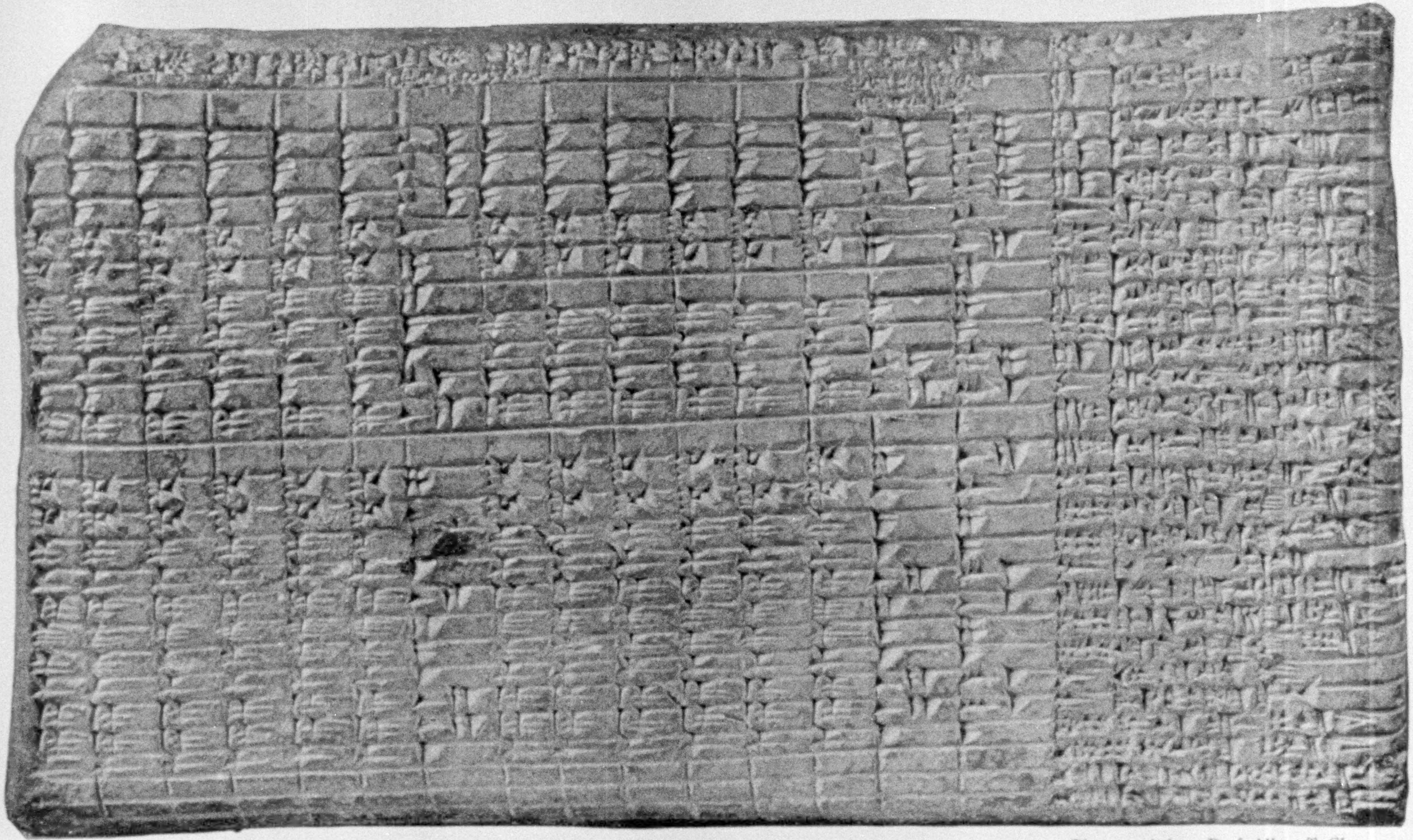
LOOKING FROM THE SITE OF SENNACHERIB'S PALACE ACROSS THE TIGRIS TO MOSUL

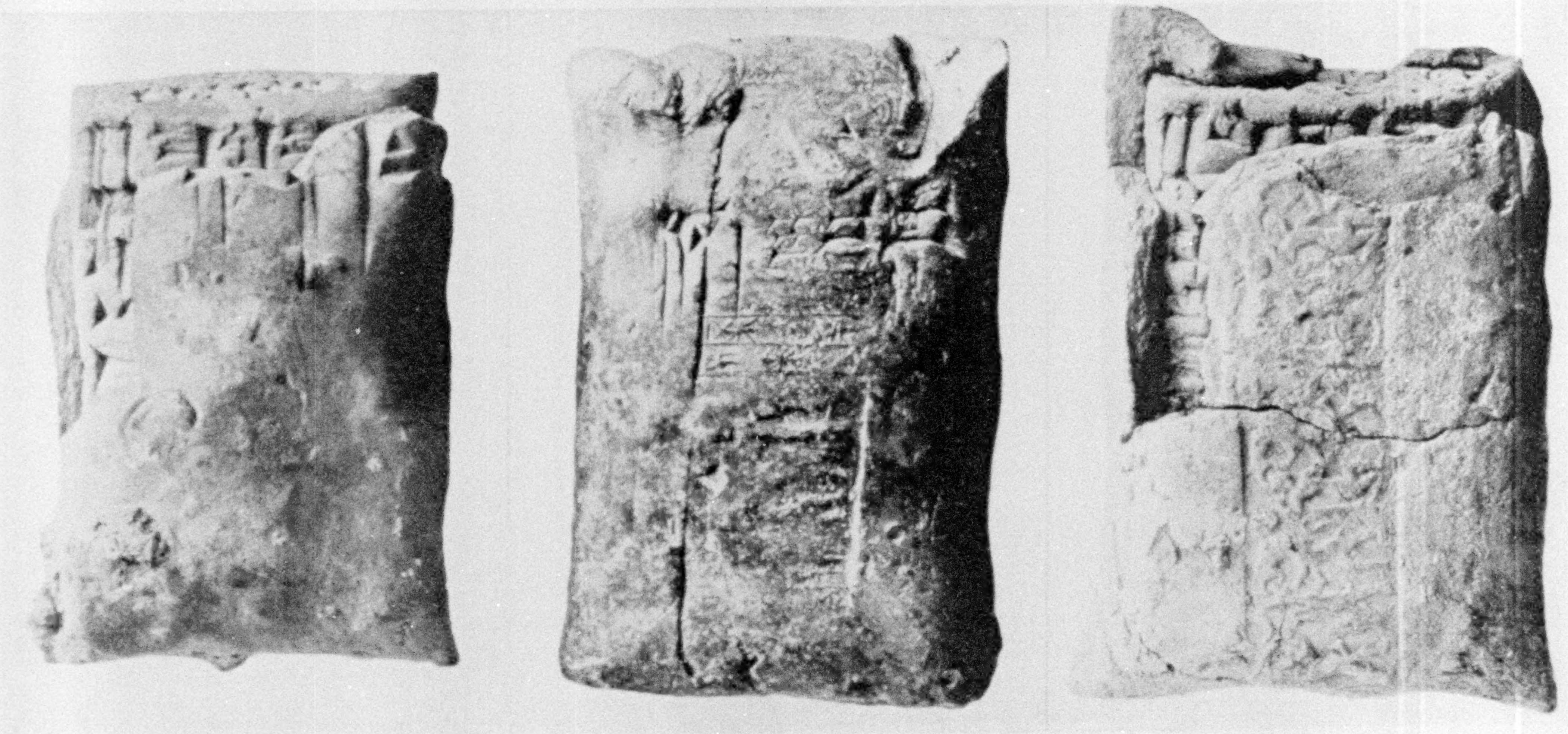
"Sennacherib was perhaps the most widely famous of all Assyrian monarchs. For us, of course, Sennacherib is the Assyrian who 'came down like a wolf on the fold,' and we think of him chiefly as the assailant of Judah, whose pride was so mysteriously brought low by the great disaster recorded in II Kings xix: 35: 'The angel of the Lord went out, and smote in the camp of the Assyrians an hundred four score and five thousand; and when they arose early in the morning, behold they were all dead corpses'" (see page 149).



Photograph from Prof. Albert T. Clay

PAY-ROLL OF TEMPLE OFFICIALS: UNIVERSITY OF PENNSYLVANIA COLLECTION

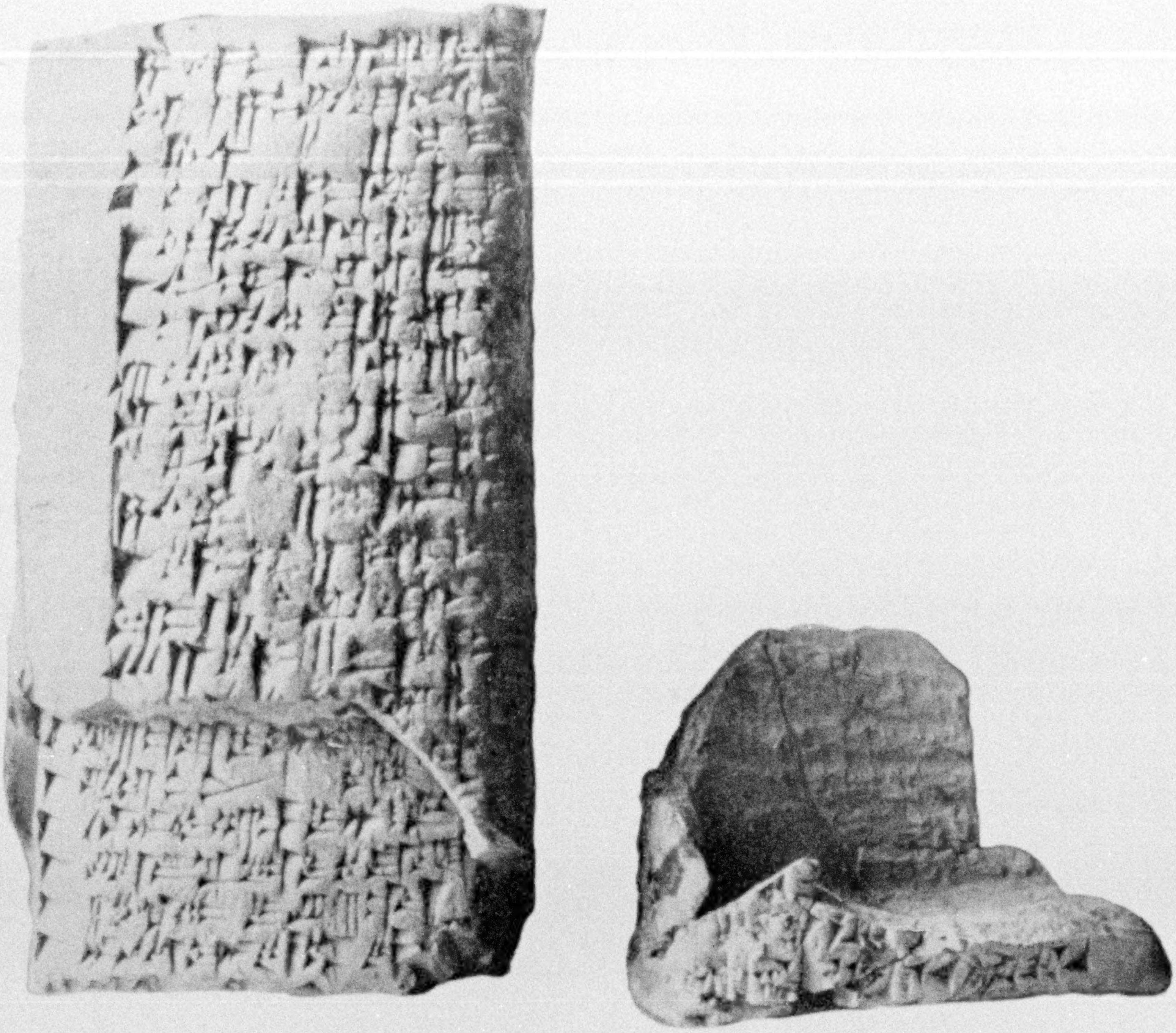
The payments for six months are followed by the total in the seventh column. The second half-year payments are also followed by the total and the sum total in the fifteenth column. This is followed by the names and the offices held. In the eighth line payments were made only for the first six months. Following the names is written "From Tishri road," meaning leave of absence. The last three names on the obverse have the word "dead" written before them. On the reverse a man's name is followed by a woman's, after which is written "his bride." As neither received payment, it is reasonable to suggest that they were on their honeymoon.



Photograph from Prof. Albert T. Clay

UNOPENED LETTERS WRITTEN IN THE DAYS OF ABRAHAM, ABOUT 2000 B. C.

The clay envelope contained the name of the individual addressed and the seal impression of the sender. The reason that the letters have not been opened is that they are copies of the original letters, used for filing purposes. Note that the envelope on the right has been broken at the top and the letter is exposed. These letters are now in the Yale Archæological Collection. Babylonia had a postal system, and it is known that there were regular dispatches between some of the principal cities. Among the large amount of material unearthed have been a great number of shipping tags made of clay. These have upon them the name and address of the party to whom the merchandise was dispatched. The tags were usually made of small lumps of burnt clay.



Photograph from Prof. Albert T. Clay

SAFEGUARDS AGAINST FORGERY IN USE 3,800 YEARS AGO IN BABYLONIA

A clay tablet, with its case, upon which was written the deed in duplicate form, and containing the seal impressions of the obligor and witness. If the obligee removed the envelope he could not replace it.

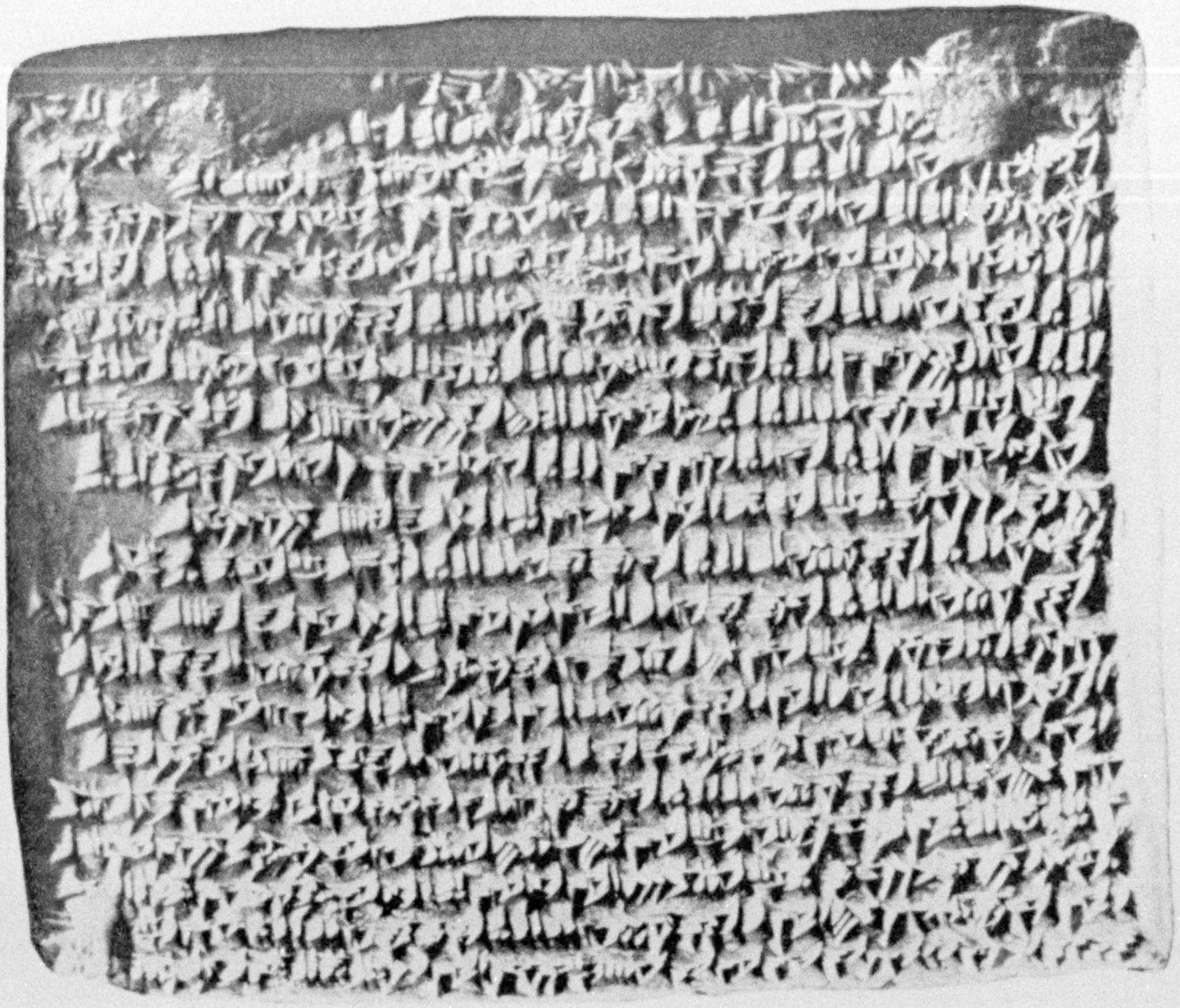
poor man, or pleb, and the slave. Among the ranks of the first mentioned were the professional men, the officers, and the tradesmen. The second class included the freedman who had been a slave.

There was a graded scale for these three classes as regards offerings that were imposed upon them. Besides these three grades in society, the code legislated also for certain classes of men and women, professions and trades.

It has been the custom with most peoples in a large part of the ancient, as well as the modern, Orient to base a betrothal upon an agreement of the man or his parents to pay a sum of money to the girl's father. In Babylonia this "bride money," together with the gift of the father and other gifts, formed the marriage portion which was given to the bride.

There were prudential reasons for this practice. It gave the woman protection against ill-treatment and infidelity on the part of the husband, as well as against divorce; for if she returned to her father's house she took with her the marriage portion unless she was the offending party. If she died childless, the portion was returned to her family. If she had children, the marriage portion was divided among them.

In case the girl's father rejected the suitor after the contract had been made, he was required to return double the amount of the bride price. The betroth-



Photograph from Prof. Albert T. Clay

A DEED OF TRANSFER OF A CULTIVATED ESTATE, WRITTEN 2,100 YEARS AGO

While no proof has come to us that Babylonia and Assyria had a Wall Street, there is much evidence in the contract literature that the men and women loved to speculate in those days just as much as they do in modern times. A great many tablets have been unearthed, which show that partnerships were formed for the purpose of buying wheat and other grains before they were harvested for future delivery. While there is nothing to indicate that these purchases were on "margins," yet the advanced stage of civilization shown by many of the laws might well lead to the belief that "margins" as well as "futures" were known in ancient Mesopotamia.

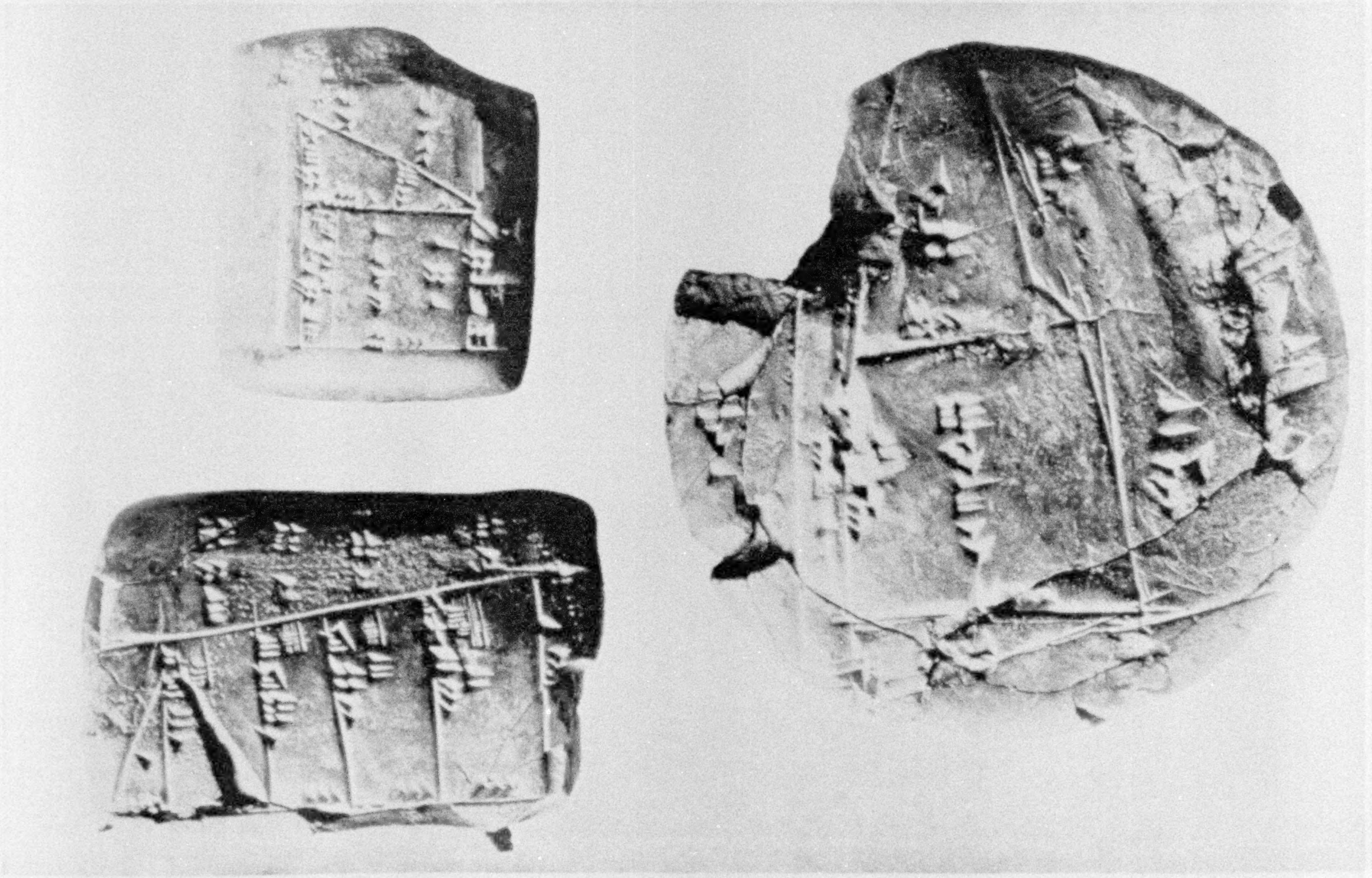
als took place usually when the parties were young, and as a rule the engagements were made by the parents. If the father died before all the sons were married, when the estate was divided the sums needed for those not having wives were deducted before the distribution was made.

MARRIAGE CONTRACTS REQUIRED

A marriage contract was necessary to make a marriage legal. In some of them peculiar conditions were made, such as the bride being required to wait upon the mother-in-law, or even upon another wife. If it was stipulated that the man should not take a second wife, the woman could secure a divorce in case her husband broke the agreement.

Concubinage, as in the case of Abraham, was indulged in, especially when the wife was childless and she had not given him a slave maid that he might have children. The law fully determined the status of the concubine and protected her rights.

At the husband's death the wife received her marriage portion and what was deeded to her during the husband's life. If he had not given her during his life a portion of the estate, she received



Photograph from Prof. Albert T. Clay

PLANS OF ESTATES, WITH MEASUREMENTS: YALE ASSYRIAN COLLECTION

The deeds of bargain and sale of property in Babylonia and Assyria were so careful to describe and plot the metes and bounds of the property transferred that surveyors say that they could, if they had all the deeds for Babylon or Nineveh, map the city and assign every lot to its proper owner.

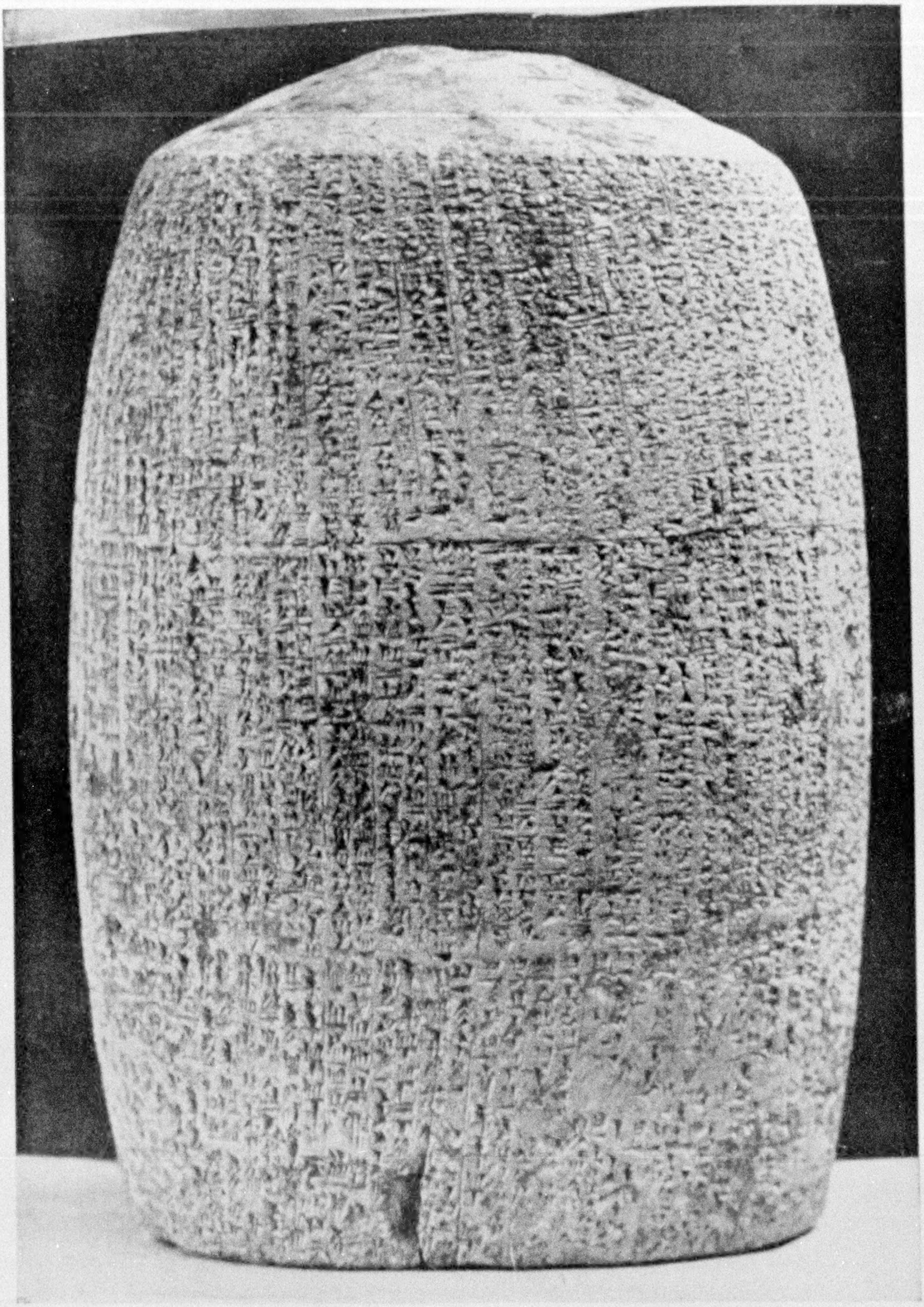


Photo from Prof. Albert T. Clay

CYLINDER OF NEBUCHADNEZZAR, RECORDING THE KING'S BUILDING OPERATIONS IN A NUMBER OF CITIES IN BABYLONIA

"On a cylinder found at Wana-Sedoum, King Nebuchadnezzar recounts his restorations of various temples, saying: 'From distant days its old foundation stone no previous king had seen. Its old foundation stone I sought for, I beheld, and upon a foundation stone of Naram-sin, my ancient ancestor, I laid its foundation. An inscription with my name I made and placed in the midst of it.'" The foundation stone that Nebuchadnezzar sought for and beheld has been found (see text, pages 209-210).

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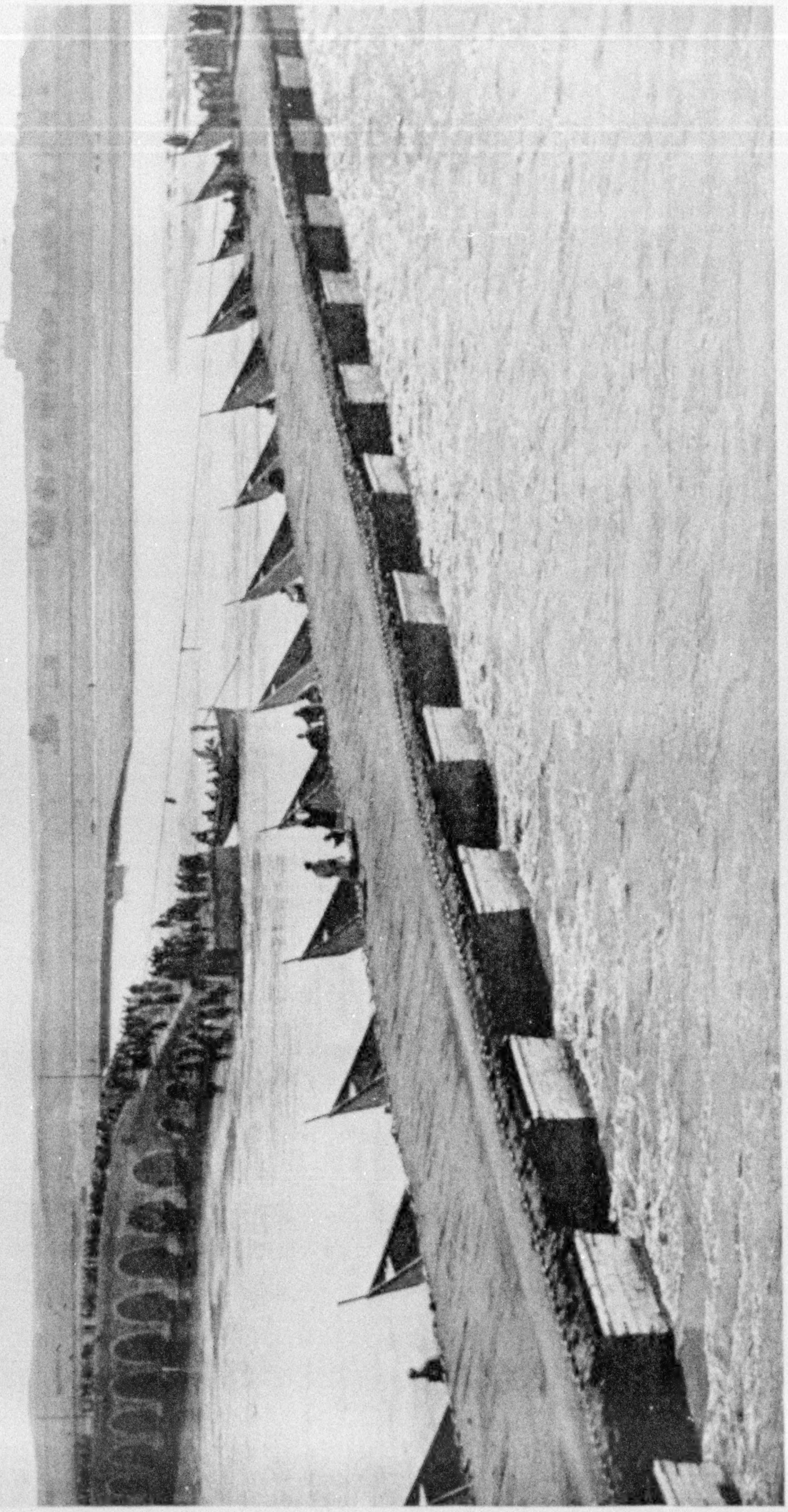

THE BRIDGE OF BOATS ACROSS THE TIGRIS AT MOSUL

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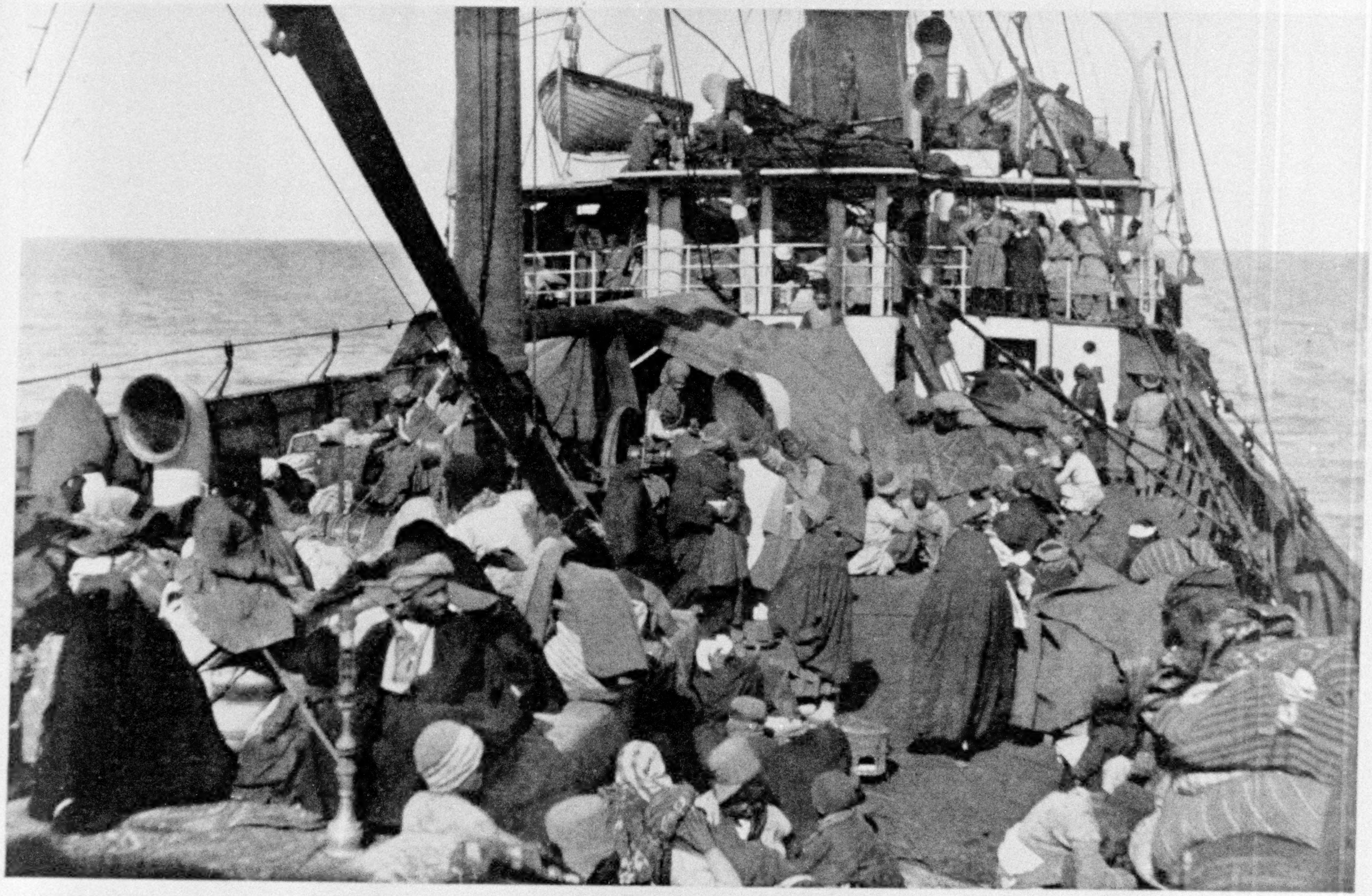
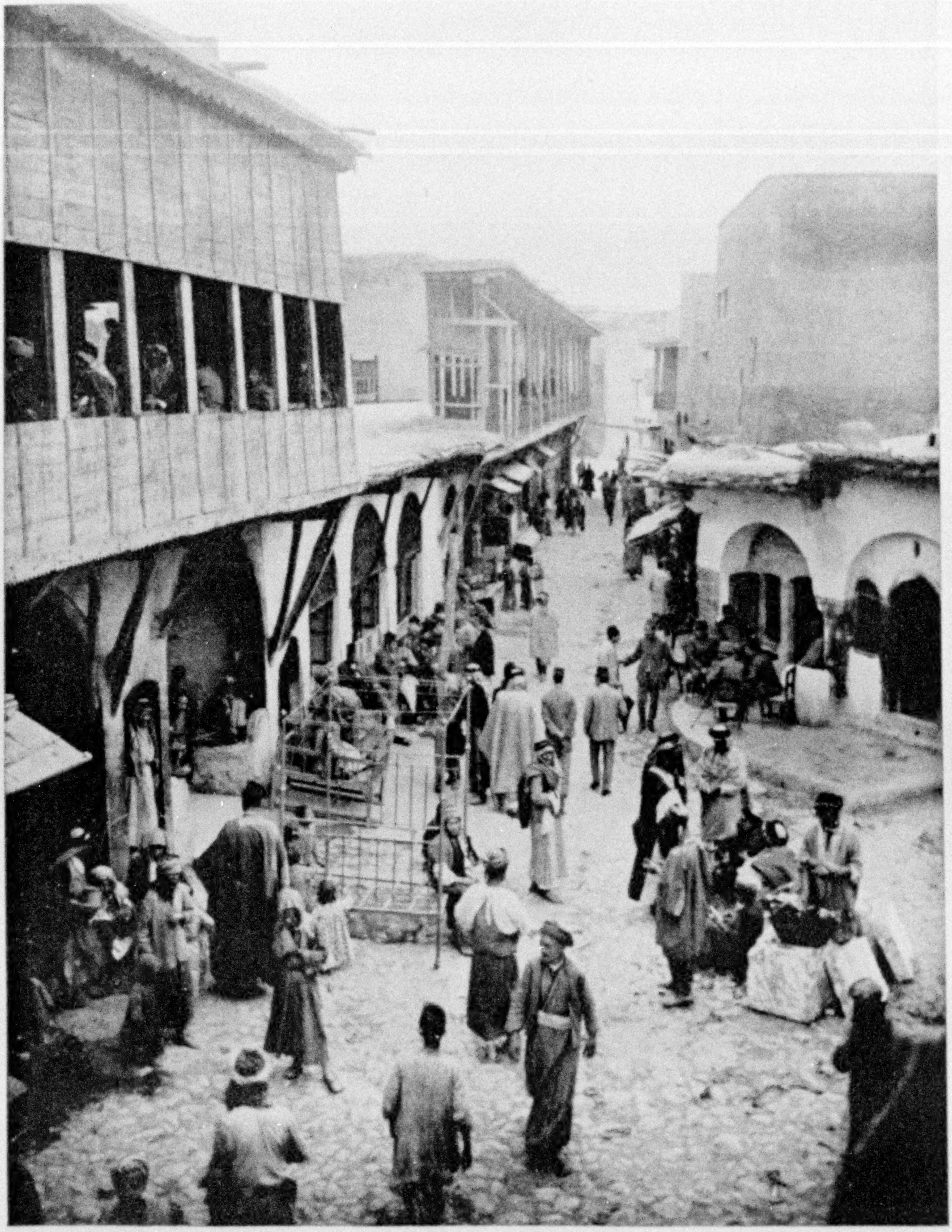


Photograph from Frederick Simpich

MOHAMMEDAN PILGRIMS ON A TIGRIS RIVER BOAT



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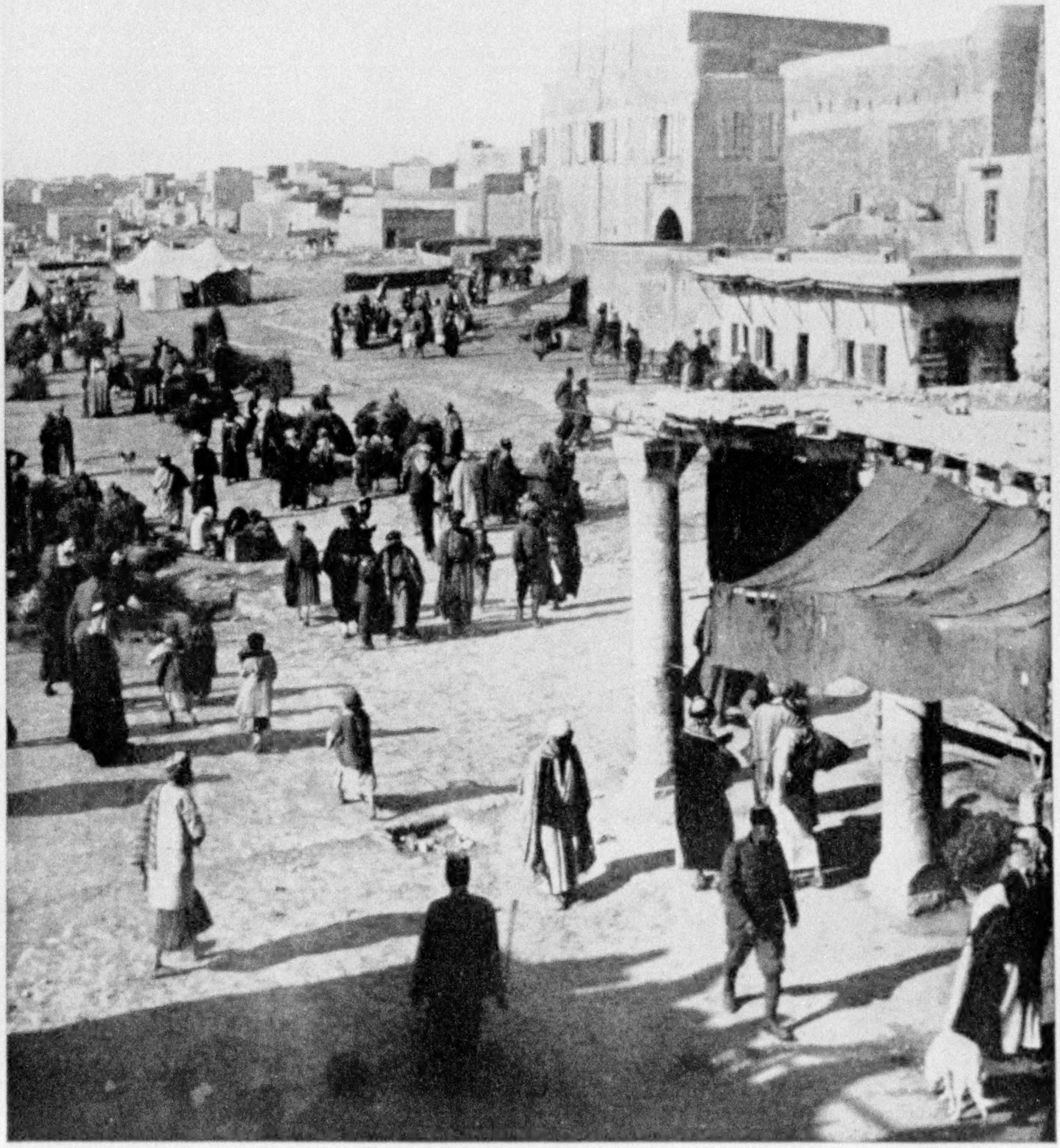
A CROWD IN THE BAZAAR OF MOSUL, A MOHAMMEDAN TOWN ON THE TIGRIS RIVER, OPPOSITE NINEVEH

The artisans of Babylonia were always ready to guarantee their workmanship. A tablet found in one site was a written guaranty that an emerald set in a gold ring would not fall out for twenty years, reading thus: "As concerning the gold ring set with an emerald, we guarantee that for twenty years the emerald will not fall out of the gold ring. If the emerald should fall out of the gold ring before the end of twenty years, Ellil-akh-iddin and Belshunu and Kahtin shall pay to Ellil-shun-iddin an indemnity of 10 mina of silver."



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THE MARKET-PLACE OF MOSUL, A FEW MILES FROM THE SITE OF ANCIENT NINEVEH

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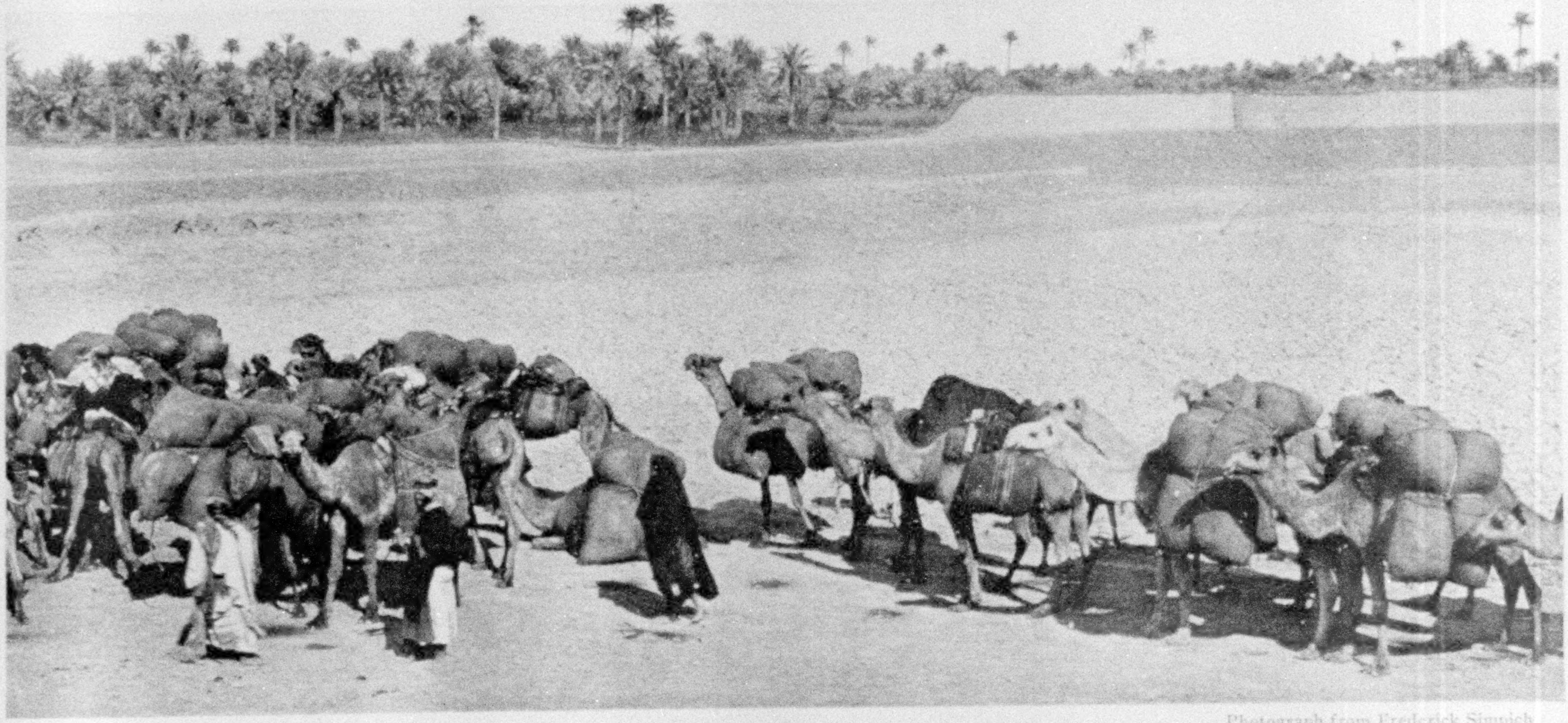
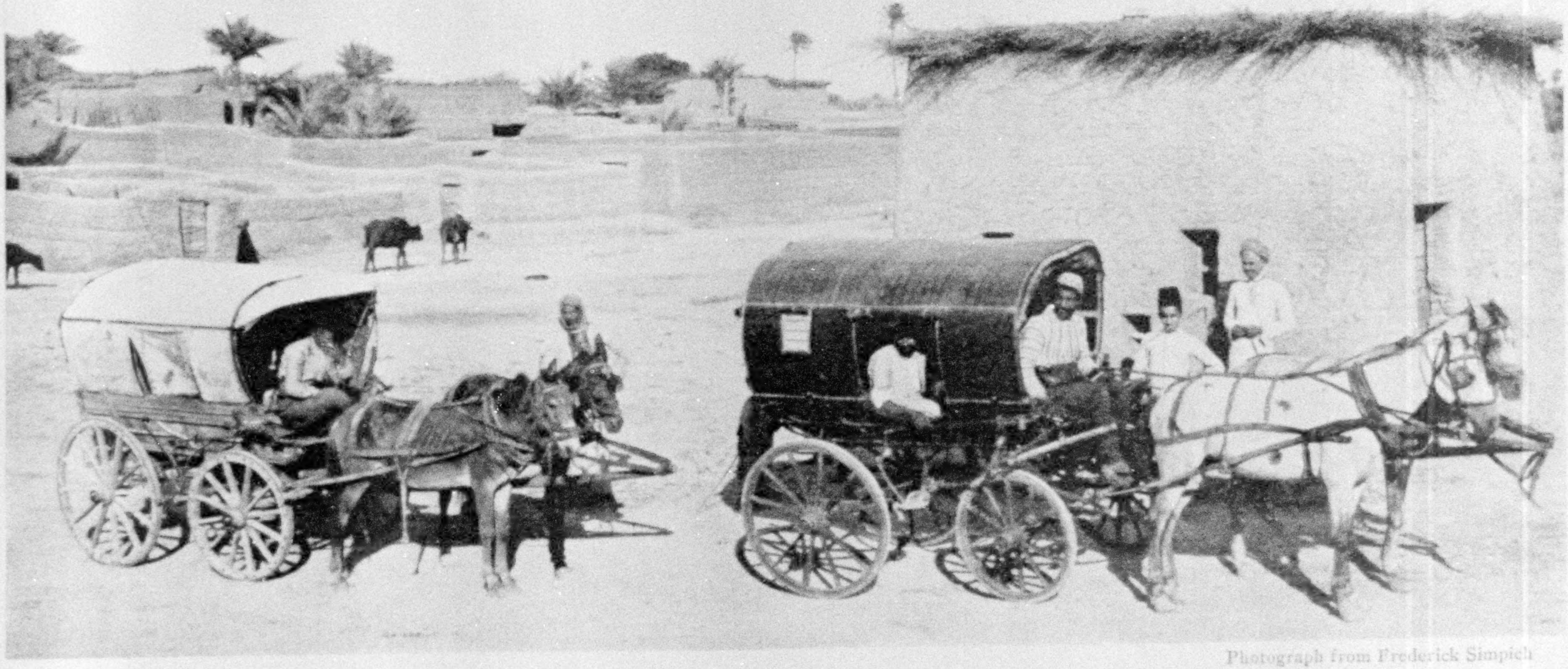


Photograph from Frederick Simpich

CARAVAN WITH WOOL FOR BAGDAD, MESOPOTAMIA

It was through this country that the railroad from Asia Minor to Bagdad was being built before the outbreak of the present war in Europe. The original concession, given in 1903, permitted the construction of the road by the Bagdad Railway Company from Constantinople to the Persian Gulf, and further permitted the levying of import dues for the payment of mileage subsidies granted by the Turkish government to the company. The right to build the road farther than Bagdad was revoked in 1911, as was also the right to a lien on import duties as security for building subsidies. The Bagdad Railway issue figured prominently in Near Eastern diplomacy for more than a decade before the clash of arms in Europe.



Photograph from Frederick Simpich

ARAB VEHICLES, USUALLY DRAWN BY FOUR MULES, USED FOR TRAVEL IN MESOPOTAMIA

Before the outbreak of the European war English capitalists were planning to spend a total of $130,000,000 on irrigation projects in Mesopotamia, under the leadership of Sir William Willcocks. It was estimated that this would irrigate 3,500,000 acres of land and would bring an income of 9 per cent on the investment. A total of 12,500,000 acres was found to be susceptible of modern irrigation.

a son's share and was permitted to retain her home, but she could marry again. A widow with young children could only marry with the consent of the judge. An inventory of the former husband's property was made and it was intrusted to the couple for the deceased's children.

The code provided that if a man divorced a woman she received her marriage portion. In case there was no dowry, she received one mina of silver if the man belonged to the gentry, but only one-third of a mina if he was a commoner.

For infidelity the woman could divorce her husband and take with her the marriage portion. In case of a woman's infidelity, the husband could degrade her as a slave; he could even have her drowned. In case of disease, the man could take a second wife, but was compelled to maintain his invalid wife in his home. If she preferred to return to her father's house, she could take with her the marriage portion.

MEN HAD TO SHOW GOOD CAUSE BEFORE THEY COULD DISINHERIT A CHILD

The father had no right over the life and death of his child, but he could treat it as a chattel. If he pledged a child for a debt, it became free in four years. For disobedience the father could cut off his hands. If a father desired to favor a son, he could only do so during life, and then by contract, for after his death the laws of inheritance fixed the child's share.

Charges of wrong-doing before a judge were required before a son could be cut off from sonship. It was only after a second offense and for a serious misdemeanor that a child could be so disinherited.

The code contains a number of laws referring to the adoption of children; and, from the large number of contracts discovered, it seems that adoption was extensively practised, especially by aged people, that they might be cared for. There are also a large number of laws in the code that refer to slavery and many documents dealing with the purchase of them.

In this connection reference might be made to the code's legislation for surgery and the practice of medicine, and also the many medical texts that have been found, most of which have come from the Library of Ashurbanipal. Not a few of the medical formulæ refer to headache. The theory of disease being largely that of demoniac possession, whenever headache attended a sickness the seat of the demon was considered to be in the head.

UNIFORMITY IN MEDICAL PRACTICE

This resulted in great uniformity in treatment. Salves or liniments, hot and cold, were used in rubbing the head. Fumes of drugs were allowed to play about the head in the hope that the demon would be driven out by the pleasant or unpleasant odors. Some of the drugs acting as counter-irritants, or soothing the nerves, doubtless many of the concoctions were found to be helpful by the physician, and were adopted as remedies by other peoples.

It has recently been shown that the terms for such substances as cossia, chicory, ammonia, cummin, and cynoglosson, occurring in medical treatises of the Greeks, are to be traced to the Babylonians.

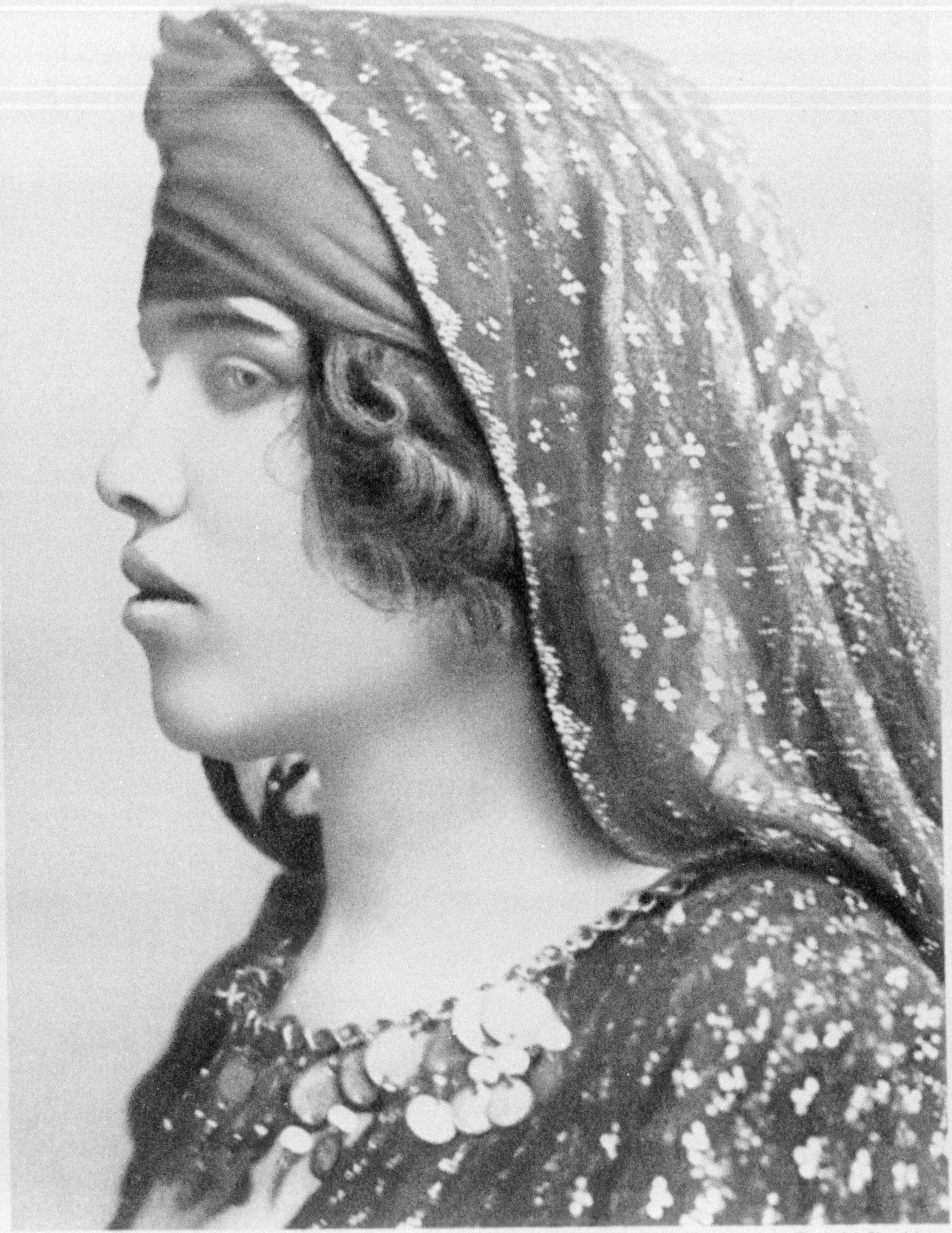
The Code of Hammurabi fixed the charges of physicians and surgeons. If a physician cured a broken limb or healed a diseased bowel, his fee from the gentry was fixed at five shekels; from the commoner, three; and from the slave, two. The surgeon for an operation upon the upper class received ten shekels; the lower, five, and a slave, two.

HARD ON THE DOCTOR

In order to discourage the surgeon from making rash operations, severe penalties were fixed in case of unsuccessful one. If the patient died, the surgeon's hands were cut off. In the case of a slave, he had to replace him with one of equal value. If the slave's eye was lost, he had to pay half the value of the slave.

If the veterinary surgeon were successful, he received one-sixth of a shekel; but if the animal died, he had to pay one-sixth of its value.

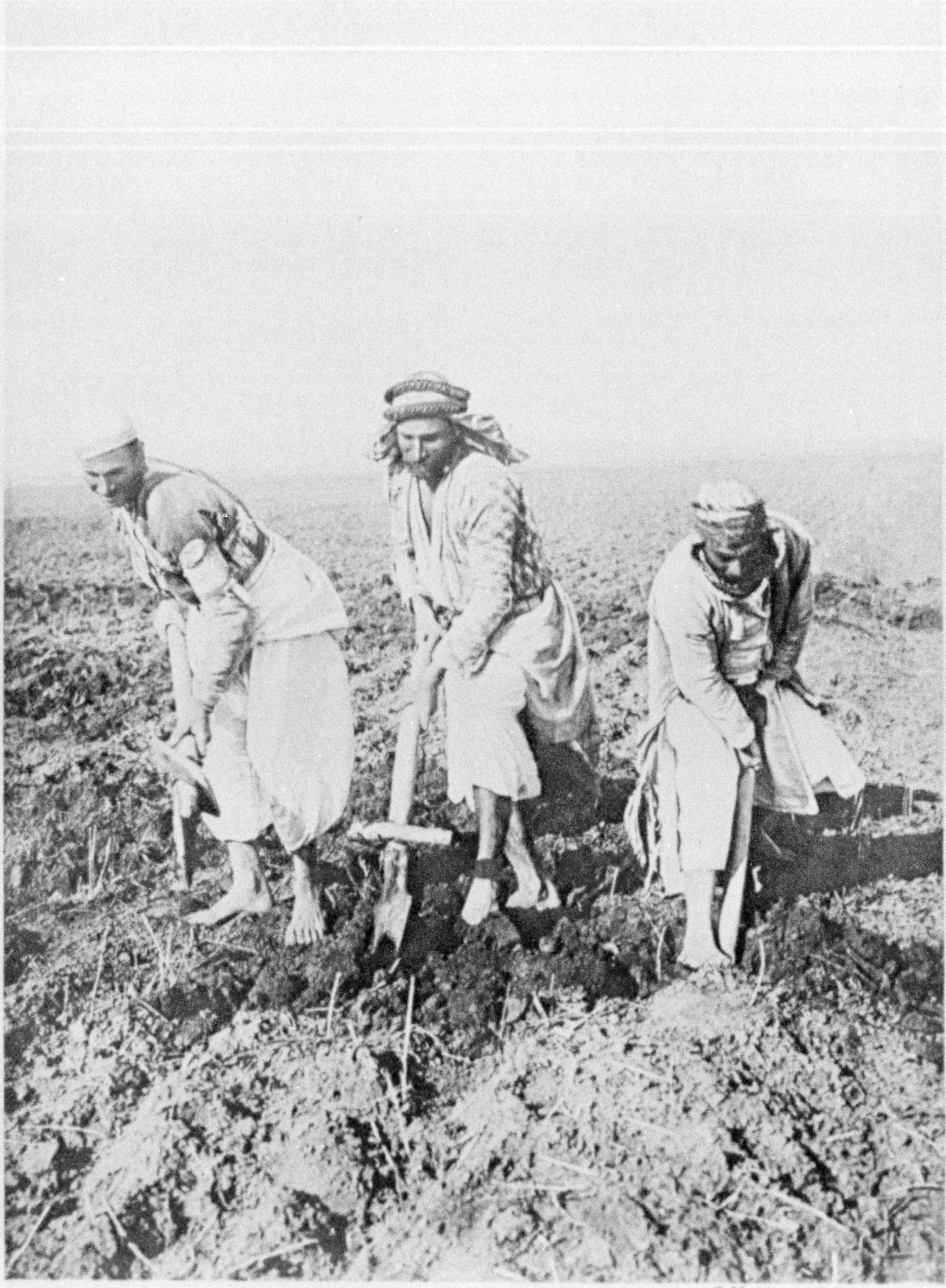
There were a large number of literary inscriptions found in the library of Ash-



Photograph by Frederick Simpich

A FAIR BEDOUIN OF MESOPOTAMIA

The Bedouins claim Ishmael as their ancestor. It was of Ishmael that the Angel of the Lord said: "And he will be a wild man; his hand will be against every man and every man's hand against him."



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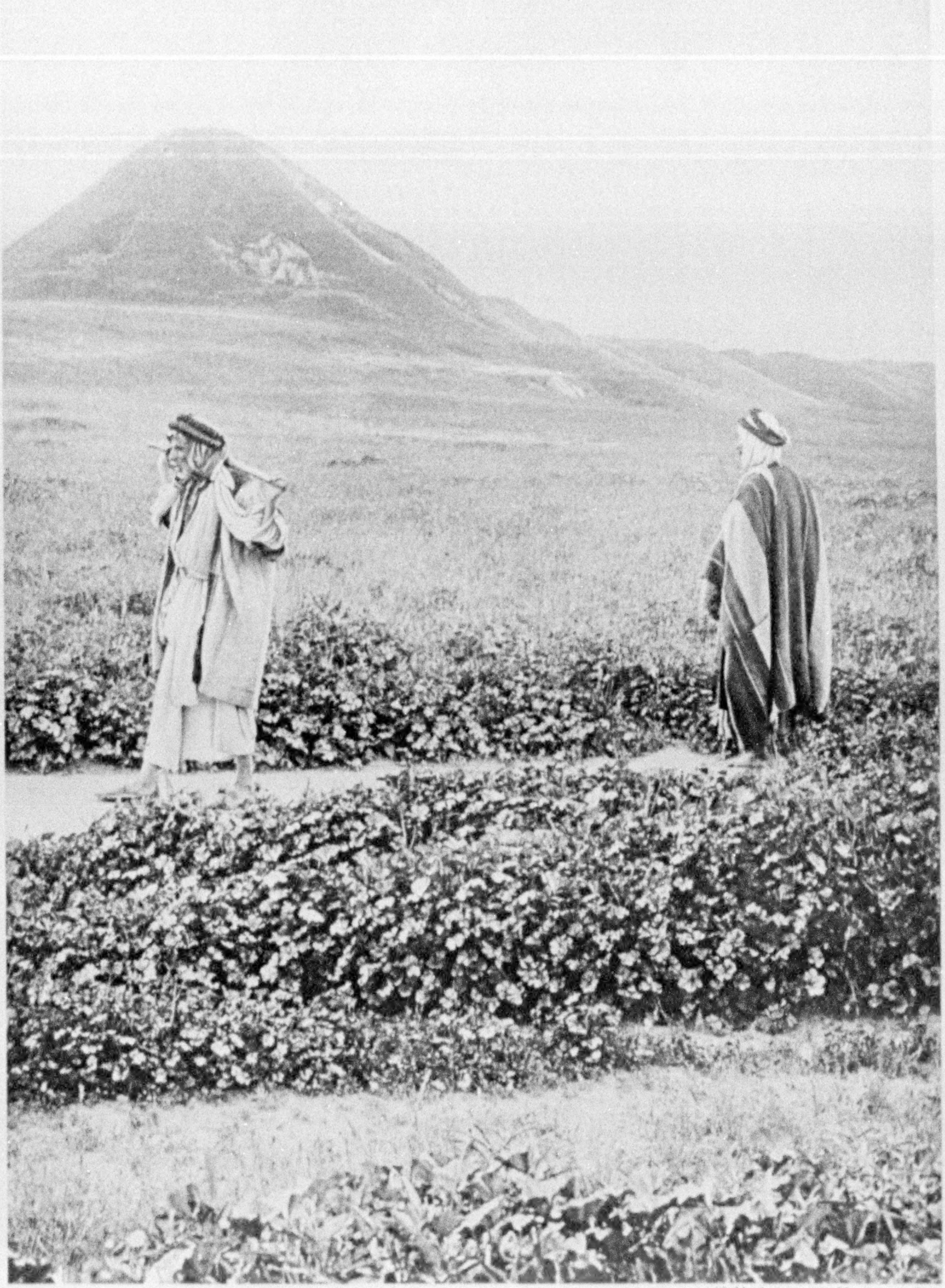
TILLING THE SOIL NEAR HARAN, NORTHERN MESOPOTAMIA

The Mesopotamian region has been famed for its agricultural products from the earliest times. Even today with almost all the ancient irrigation system in ruins, the rich black earth, when watered, produces in greatest abundance. In ancient times, under the proper irrigation, its productivity was the subject of comment by every writer.



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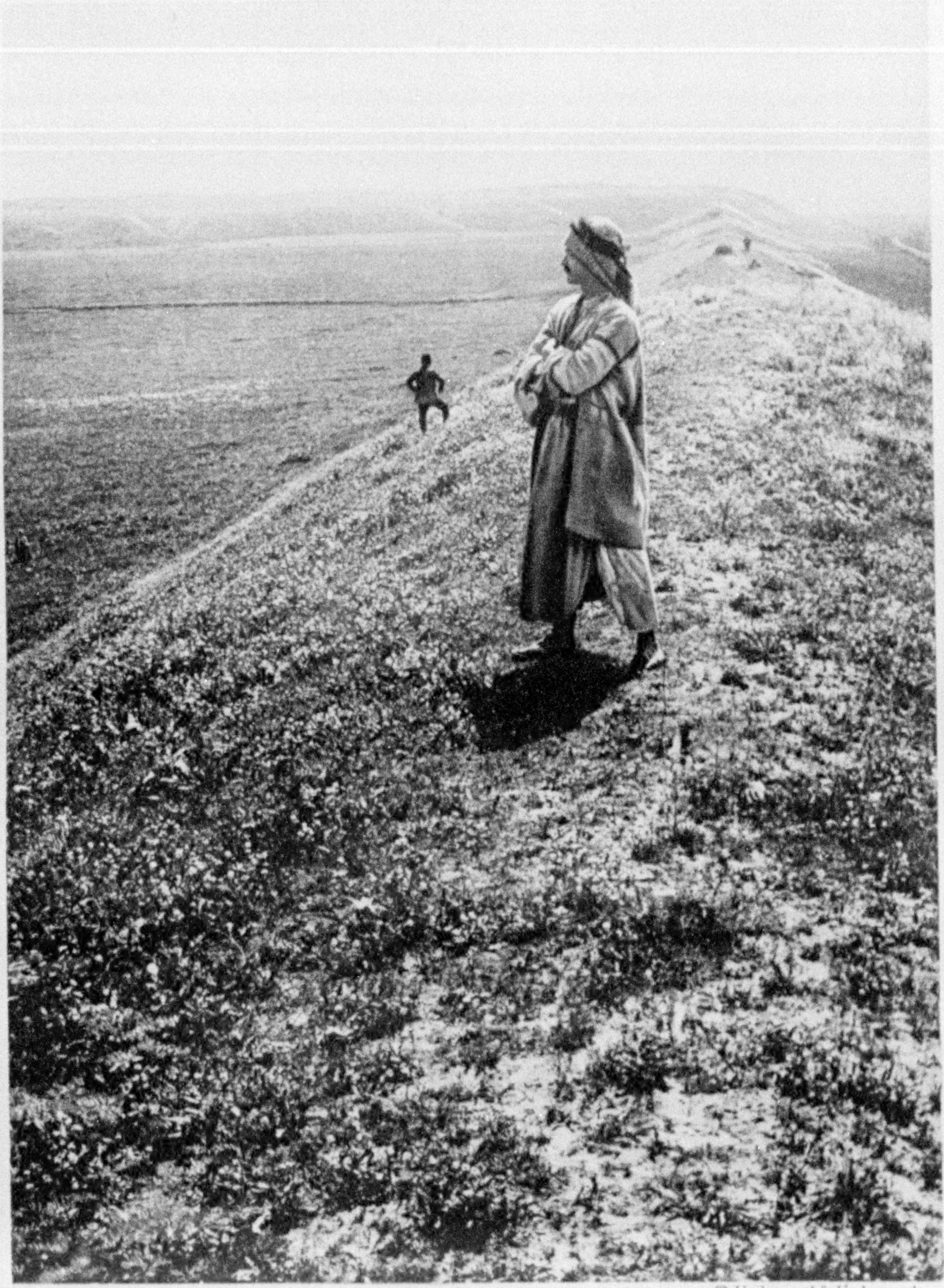
THE MOUND IN THE BACKGROUND IS THE REMAINS OF AN ANCIENT CITY

While many of the ancient sites of Babylonia have been identified, as Babylon, Nippur, Erech, Larsa, Ur, Lagash, etc., and have been partially excavated, hundreds in Babylonia and thousands in western Asia, with their ruin-hills practically untouched, retain their names as well as their secrets.



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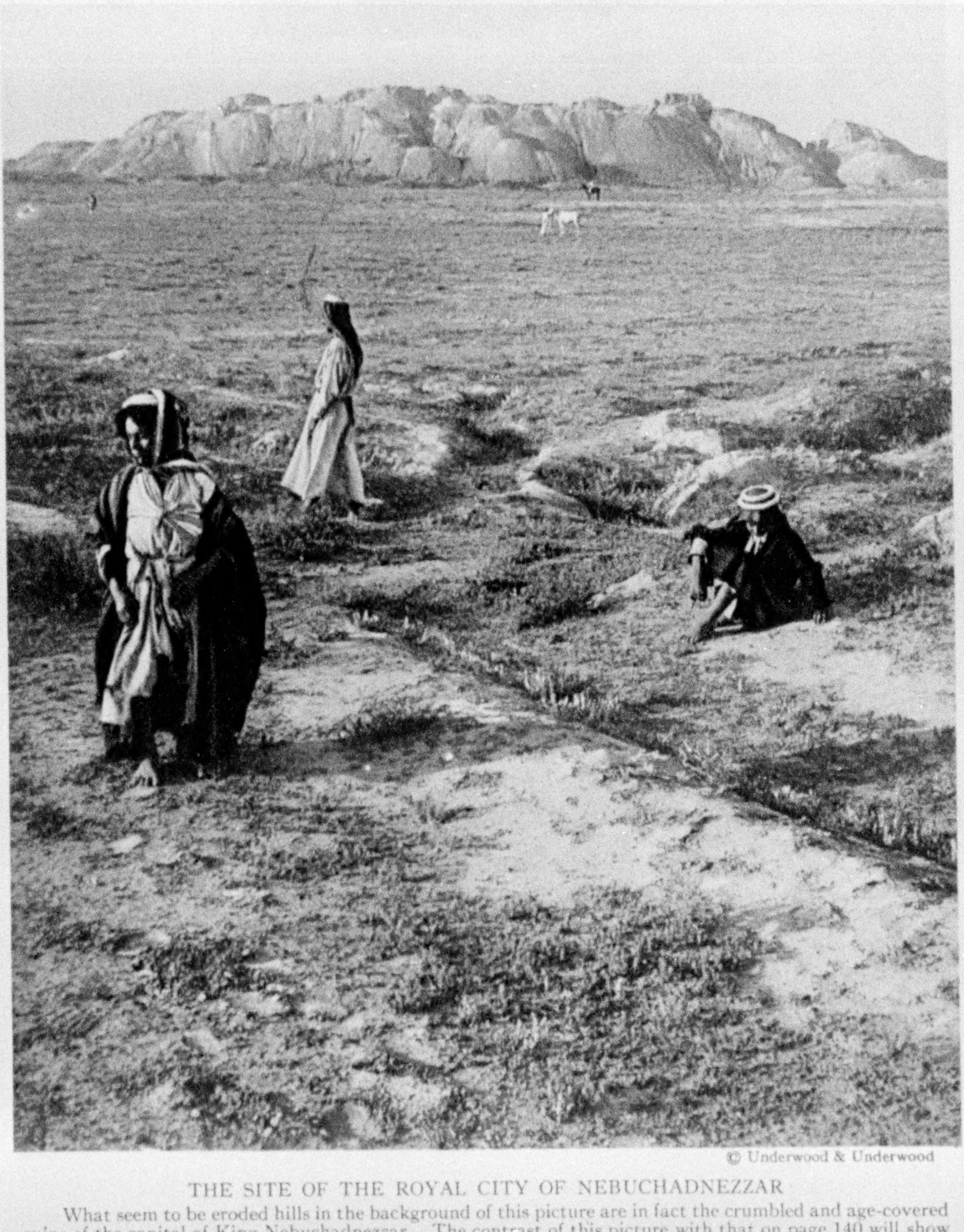
A SECTION OF THE MIGHTY WALL, NOW COMPLETELY CRUMBLED, THAT ONCE PROTECTED NINEVEH

That wonderful region where the Garden of Eden was laid out, where the great civilizations of Assyria and Babylonia rose and fell, and out of which came the mighty hosts of Xerxes and Darius on their world-conquering missions, is again today one of the Armageddons of human history.

XUM



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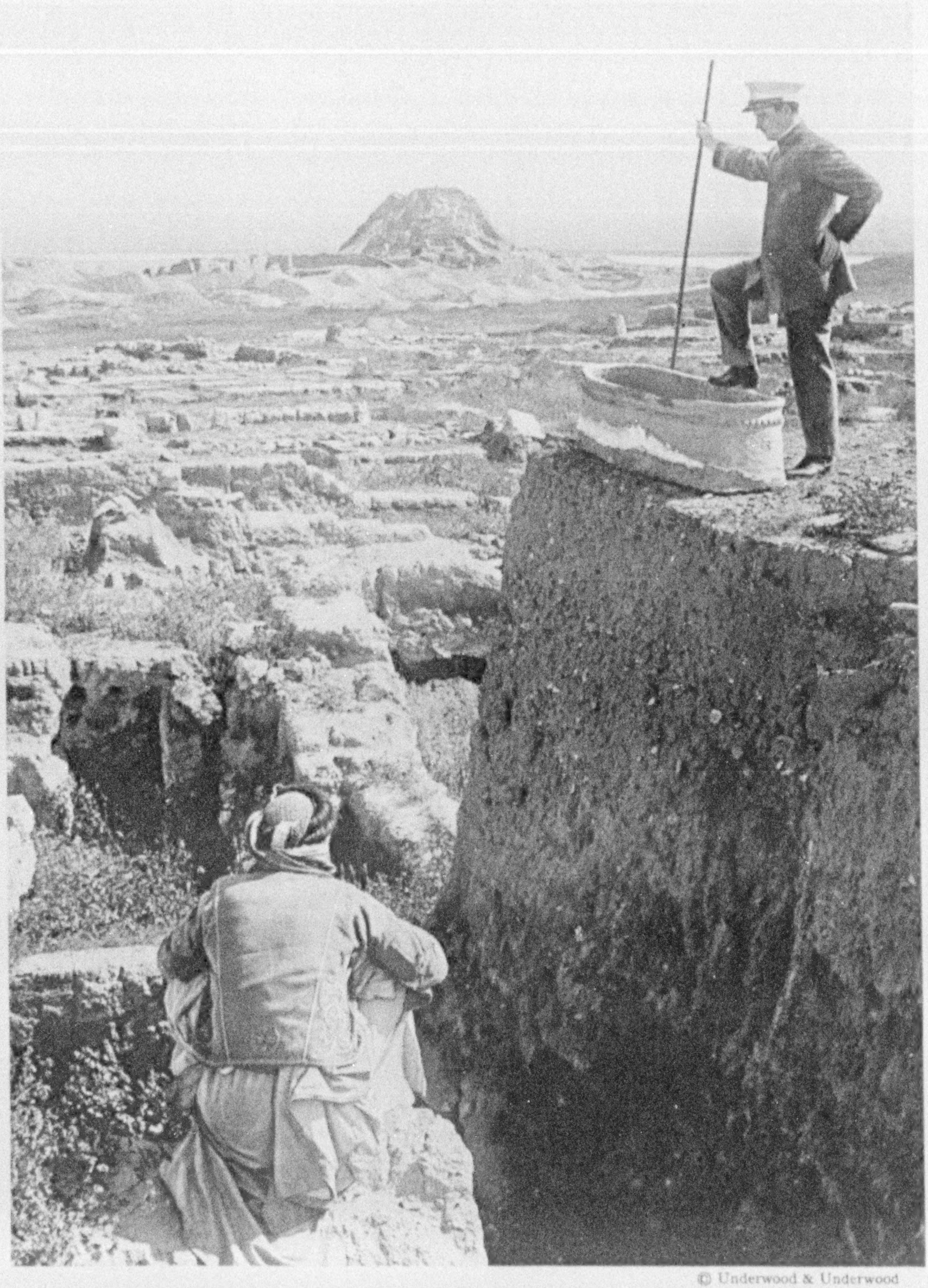
THE SITE OF THE ROYAL CITY OF NEBUCHADNEZZAR

What seem to be eroded hills in the background of this picture are in fact the crumbled and age-covered ruins of the capital of King Nebuchadnezzar. The contrast of this picture with that on page 140 will show the "before" and "after" of the work of excavation.



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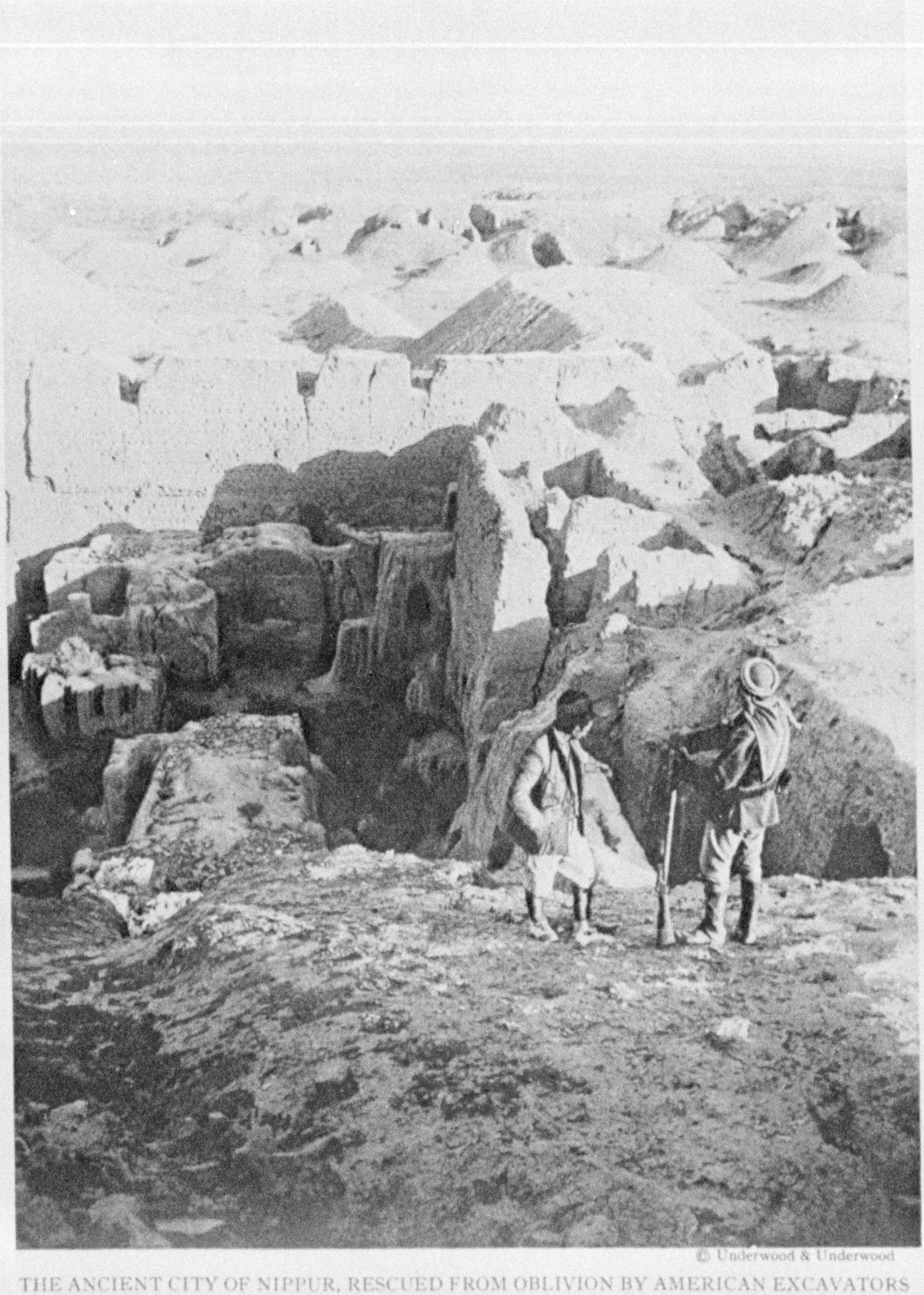
RUINS OF THE GOVERNMENT BUILDINGS OF THE GREAT CITY OF ASSUR, THE FIRST CAPITAL OF ASSYRIA

Just as in these latter days we put records of our times in the cornerstones we lay, so the Babylonian and Assyrian rulers were careful to preserve the records of their times. Will the distant future ever bring the time when men shall excavate the ruins of our cities as we in these days search those of long ago?



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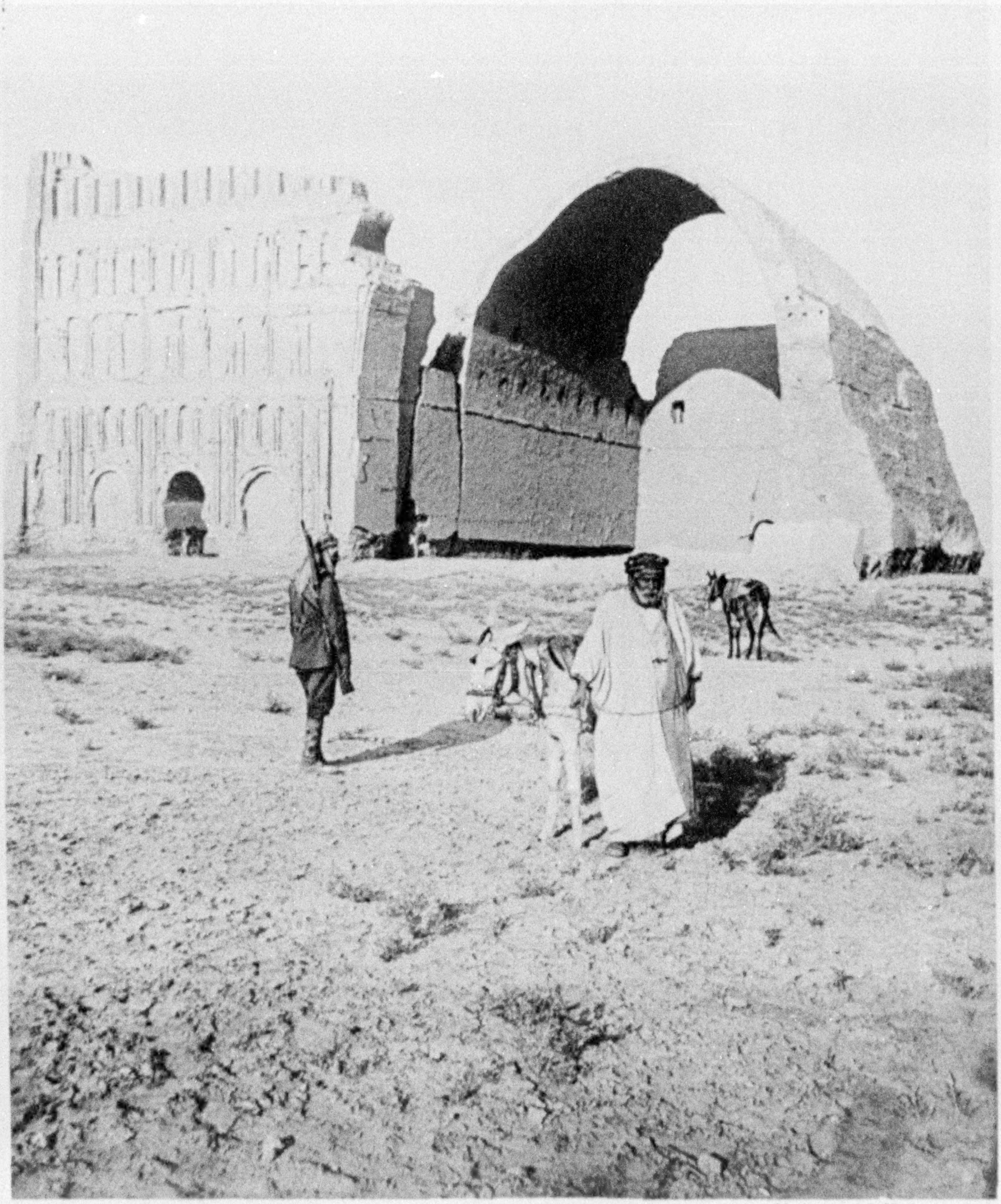
THE ANCIENT CITY OF NIPPUR, RESCUED FROM OBLIVION BY AMERICAN EXCAVATORS

The problem of knowing where to begin digging in the exploration of an ancient city site cannot be solved; the student of ancient geography has to trust that far to chance. If, in his first excavations, he happens to dig into the ruins of some great public building of the ancients, his problem is very much simplified. This picture shows the work of excavation after the explorer has struck "pay dirt," so to speak.



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RUINS OF THE PARTHIAN PALACE OF CTESIPHON

This ancient town, now the centre of the Mesopotamian theatre of war, is on the Tigris, twenty-five miles below Bagdad. Herodotus says grain produced two hundred and even three hundred-fold in this region, and that blades of wheat were often four fingers wide. Either Herodotus got his information from the secretary of the Babylonian Chamber of Commerce, or else Mesopotamia possessed better farmers than any part of the world possesses today.

XUM

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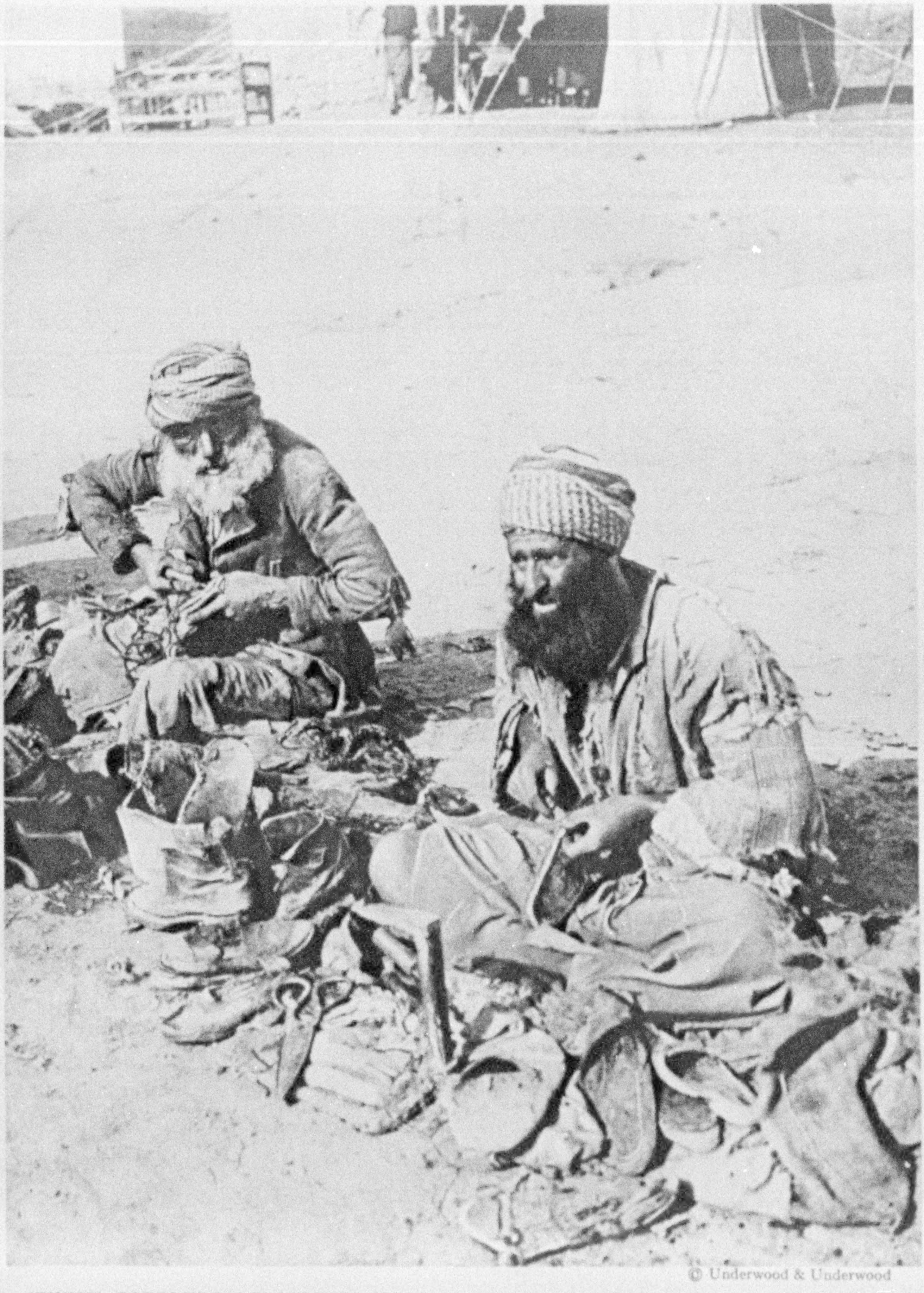
VIEW FROM MOSUL ACROSS THE TIGRIS TO NINEVEH, MESOPOTAMIA

It is only three-quarters of a century ago that the first real exploration work was begun in Mesopotamia, under P. E. Botta, stationed at Mosul, as a French consular agent. The announcement of his discovery of a portion of an Assyrian building in Nineveh, filled with monuments of the past, created tremendous excitement. Since then, the pick and spade of explorers, French, German, British and American, and the patient toil of the decipherer, have thrown a flood of light upon the history of these ancient peoples, and the history of civilization has been carried back to 4000 years before Christ.

XUM



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JEWISH COBBLERS REPAIRING SHOES FOR ARABS NEAR MOSUL, MESOPOTAMIA

The wanderings of the children of Israel in the desert were no greater than those of their fathers. When Abraham was still a young man he journeyed with his father to Haran, where he dwelt for a period. From there he went into Canaan, only to be driven by famine into Egypt, from which place he later was banished. He went back to Canaan and famine again overtook his people in the days of his grandson Jacob, and once more brought them to Egypt, whence they were forced to return to Canaan a third time by the exactions of the Pharaoh who knew not Joseph

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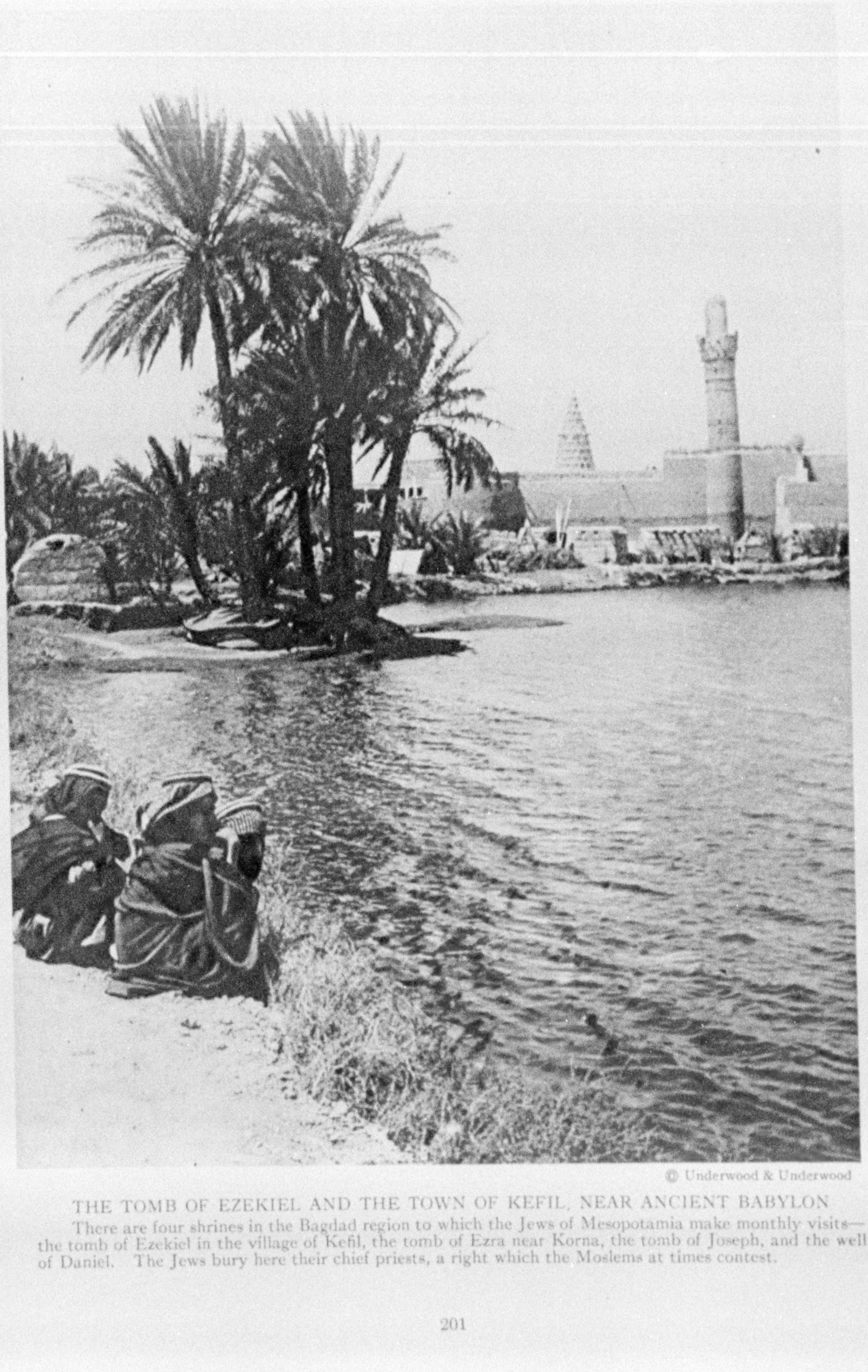

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THE TOMB OF EZEKIEL AND THE TOWN OF KEFIL, NEAR ANCIENT BABYLON

There are four shrines in the Bagdad region to which the Jews of Mesopotamia make monthly visits—the tomb of Ezekiel in the village of Kefil, the tomb of Ezra near Korna, the tomb of Joseph, and the well of Daniel. The Jews bury here their chief priests, a right which the Moslems at times contest.

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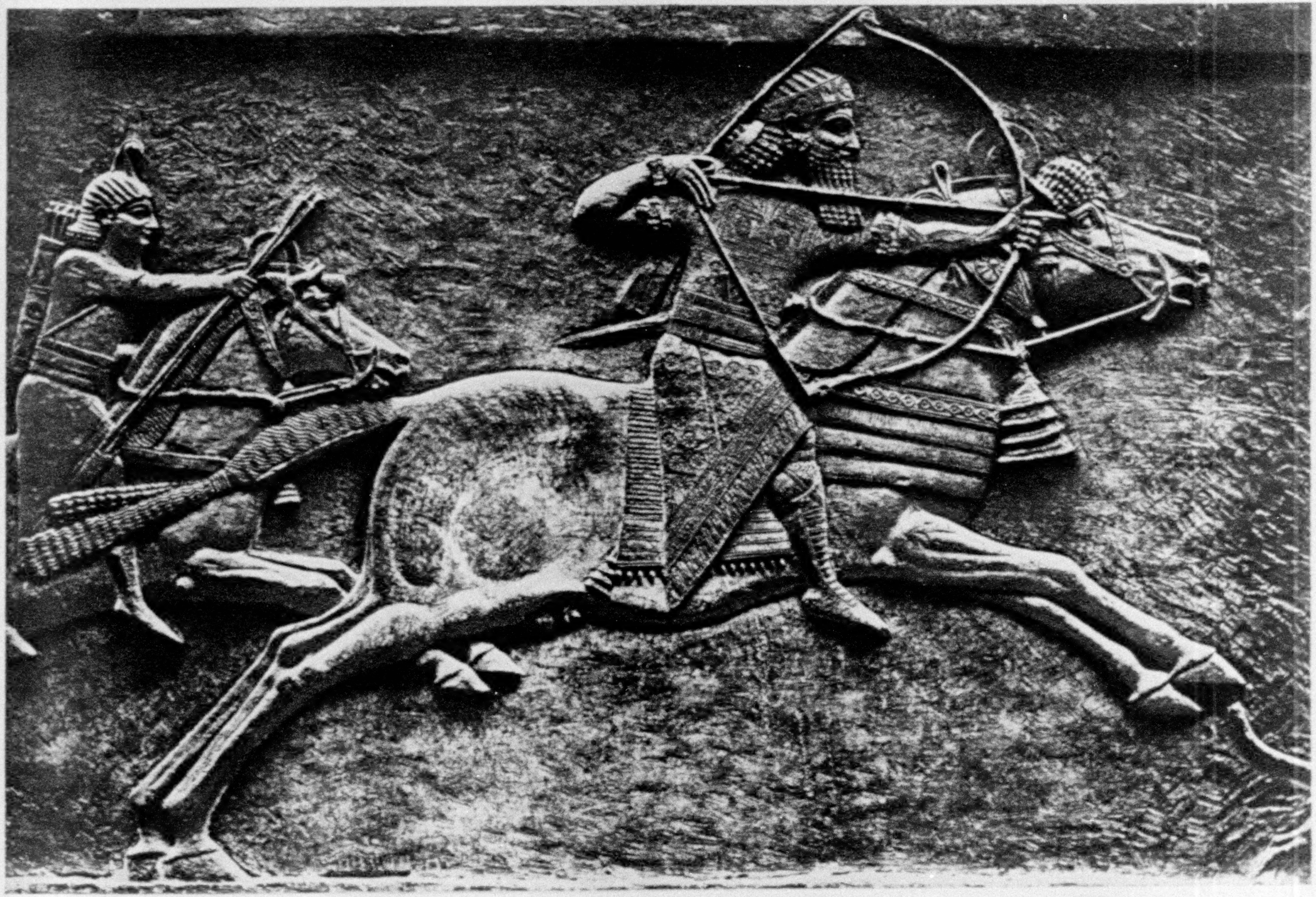
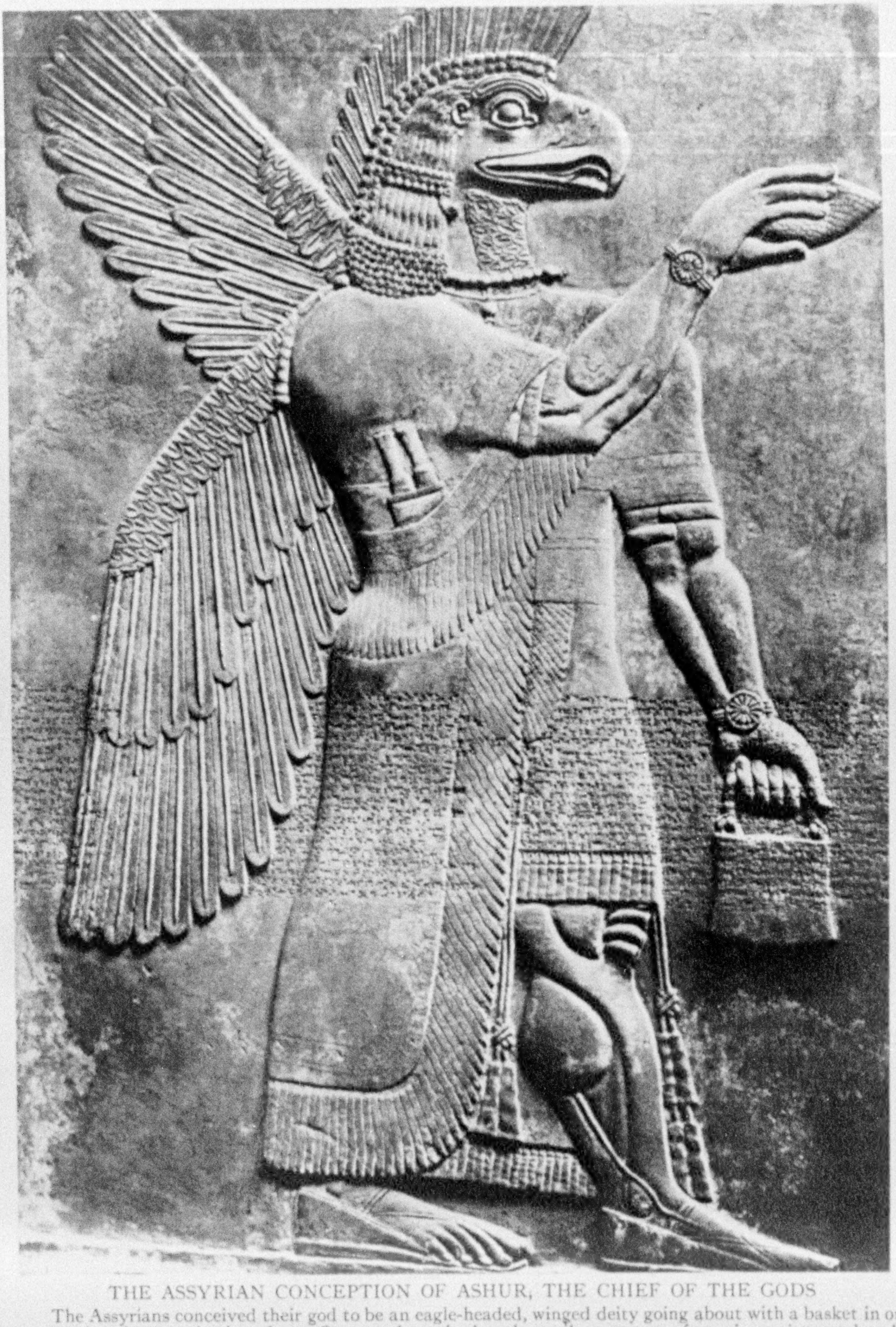


ASHURBANIPAL, THE LION HUNTER, ON HORSEBACK

Ashurbanipal, conqueror of Egypt, was one of the most enlightened of Assyrian monarchs. He had a great taste for literature, and in this respect we owe him an infinite debt. His scribes were commanded by him to make copies of the annals of Babylonia and Assyria from the libraries of all the most important cities in the land, and it is from these copies, made on clay tablets and preserved in the library of the king's palace, that the bulk of what is known of Assyrian and Babylonian history and religion has been learned.



THE ASSYRIAN CONCEPTION OF ASHUR, THE CHIEF OF THE GODS

The Assyrians conceived their god to be an eagle-headed, winged deity going about with a basket in one hand and a pine cone in the other. One wonders whether the modern custom of wearing wrist watches did not come down to us from the equitation experts of Babylon. This image was carved about 4,000 years ago.

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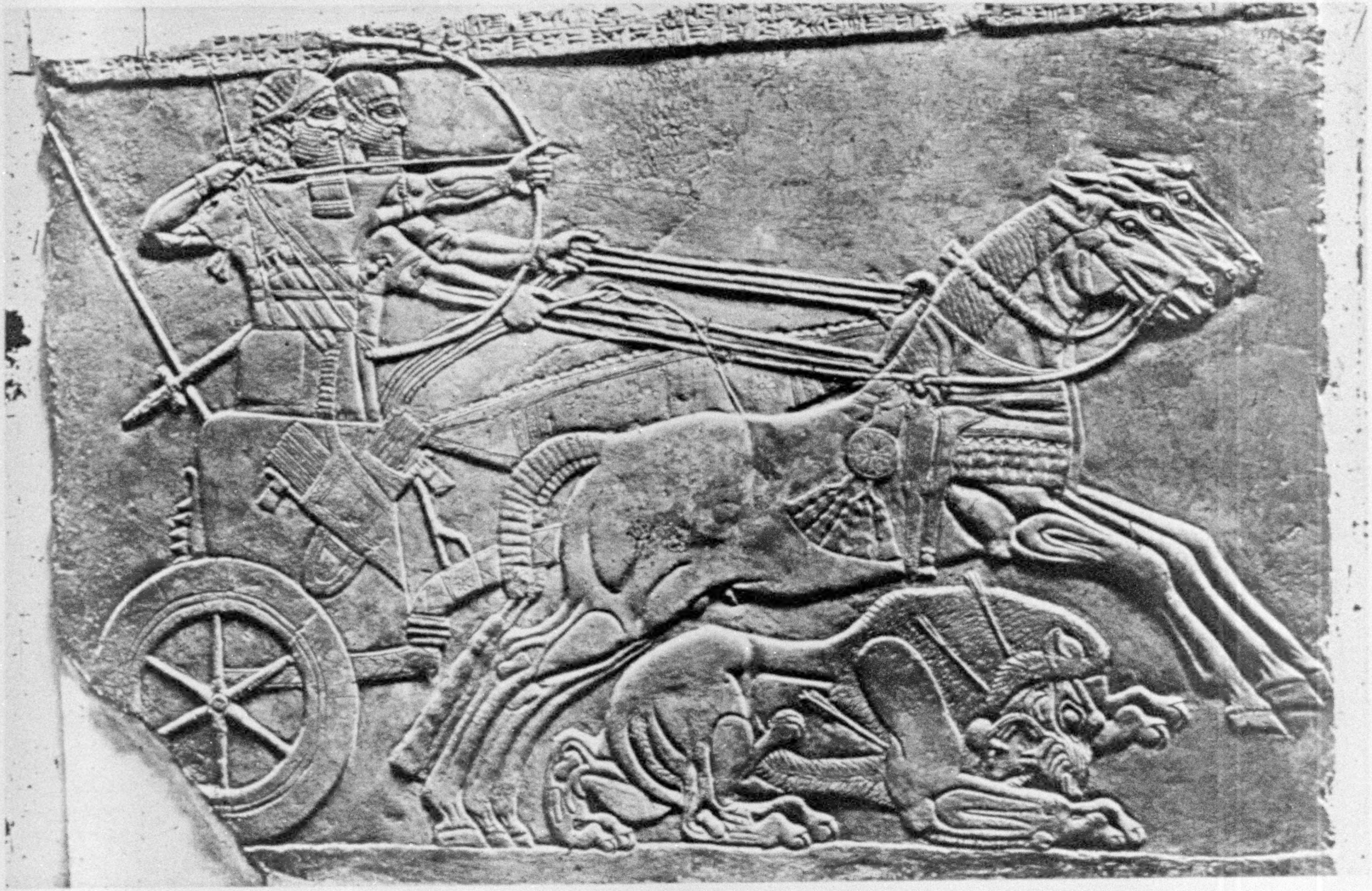
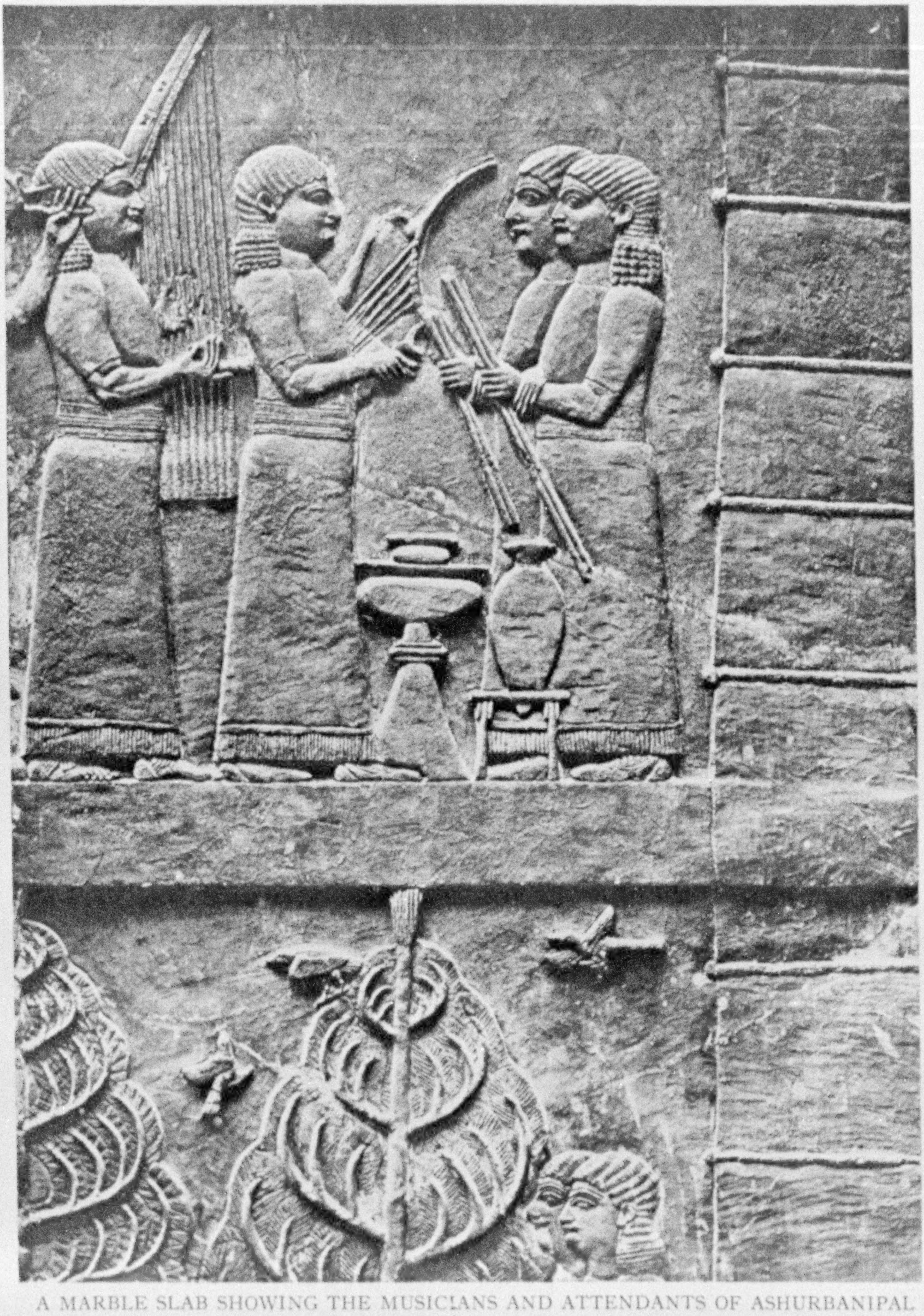


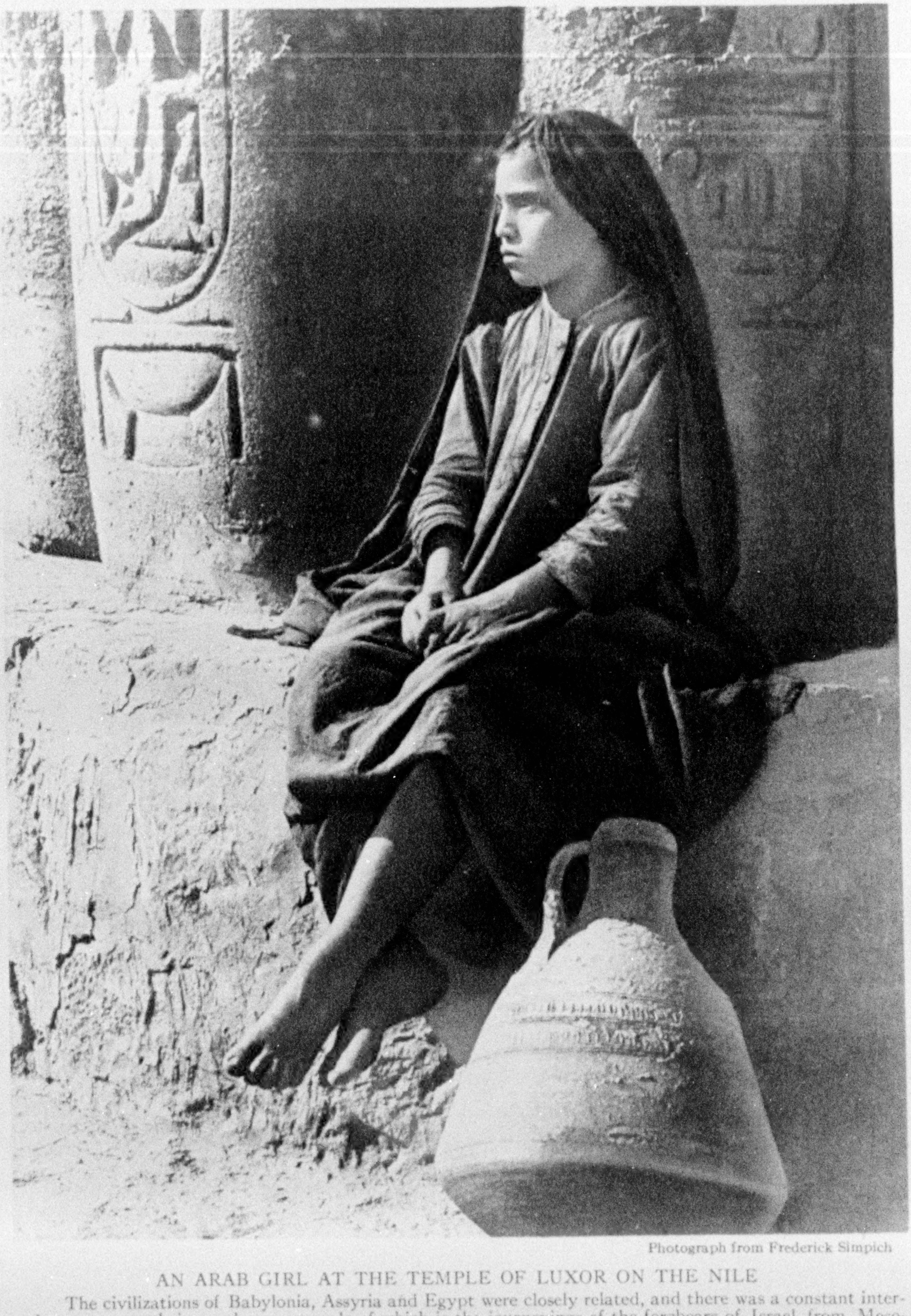
ASHURNATSIRPAL HUNTING LIONS IN HIS CHARIOT, NINEVEH

Many of the rulers of Assyrian Babylonia were proud of their prowess as hunters, and if their exploits were anywhere near as brave as their sculptors have depicted them, big game hunting in the 20th century certainly has not more excitement in it than it had in the days of the Ashur-pal line of kings.



A MARBLE SLAB SHOWING THE MUSICIANS AND ATTENDANTS OF ASHURBANIPAL

Music had its charms in ancient Babylon and Nineveh, and no kingly court was without its staff of musicians.



Photograph from Frederick Simpich

AN ARAB GIRL AT THE TEMPLE OF LUXOR ON THE NILE

The civilizations of Babylonia, Assyria and Egypt were closely related, and there was a constant interchange among their people, an example of which is the journeyings of the forebears of Israel from Mesopotamia to Canaan, into Egypt and back again.

urbanipal. Several mythological poems, besides fragments of others, were found, of which the seven tablets of creation are among the most important. Apsu and Tiamat, who represent the primeval watery chaos, were the first creators. They were followed by other generations of gods, whom they sought to destroy.

This resulted in the fight of Marduk with the primeval goddess Tiamat. He slays her and splits her in halves like a fish, half of which he uses to make a firmament to keep back the celestial waters, and the other half the earth to hold back the subterranean waters.

Another very important poem is that which recounts the deeds and adventures of Gilgamesh, an early ruler of Erech, about whose name these myths are associated. It was written upon twelve large tablets and found also in the library of Ashurbanipal. This version was copied from older originals, of which a large but fragmentary tablet is preserved in the Yale Babylonian Collection; and there is also a fragment in the Berlin Museum.

A BABYLONIAN "PARADISE LOST"

Other important mythological poems are the flight of Etana on the back of an eagle to heaven and his fall to the earth; the myth of Adapa, in which he failed to obtain immortality by refusing to accept food at the advice of the god Ea; Ishtar's descent into hades, etc.

A large number of hymns and liturgies have been found at various sites. At Tello, a few belonging to the early Sumerian period were discovered. At Nippur, Sippar, Erech, and Larsa many were found, chiefly belonging to the early period, about 2000 B. C.; at Erech and Babylon also some of a later period. By the help of these the history of Babylonian worship will be written.

At present the earliest known liturgies are written in Sumerian, but after about 2000 B. C. it generally became the custom of supplying the Sumerian texts with interliner's versions in the Semitic vernacular. Whether the excavations at some of the earlier Semitic centers in the northern cities will yield earlier original Semitic liturgies, and show that the Sumerians were indebted to these, remains to be seen.

Moreover, it is known that the psalmists among the Semitic Babylonians used the Sumerian liturgies in their service and continued to use them until the closing days of Babylonian history. In other words, Sumerian was the liturgical language.

A CONSCIOUSNESS OF SIN

A consciousness of sin prevades the liturgies of Babylonia. By the use of them the sinner desired to pacify the gods, who manifested their anger by bringing woes upon mankind. Through lamentations and sighings the penitent sought relief. It must be conceded that the Babylonian prayers were such that must have stirred the soul to its depths. The fundamental element of religions is therefore inherent in these liturgies.

It has been pointed out that the Babylonian penitential psalms are similar in form to the Biblical. The contents and character, however, are quite distinct. We have in the Babylonian crude polytheism and practices of a natural religion, which, of course, is responsible for a different conception of the atonement sought for.

Another large body of temple rituals was the incantations or magic rituals by which the priests exorcised the evil spirits. These rituals were quite extensive in variety. There were, for example, the "burning" series, in connection with which, with charms, magical figures were consumed by fire representing the fever, the headache, the evil demon, the Labartu, or female demon.

READING THE SIGNS OF THE TIMES IN STARS AND LIVERS

These texts seem to emanate from the later periods, which would mean a degeneration of the higher forms of worship, exactly the reverse of what is found among other peoples. But whether other libraries, when excavated, will show that these crass religious expressions of man are older than the religious literature of a higher order remains to be seen.

A large number of texts have been found in the various libraries dealing

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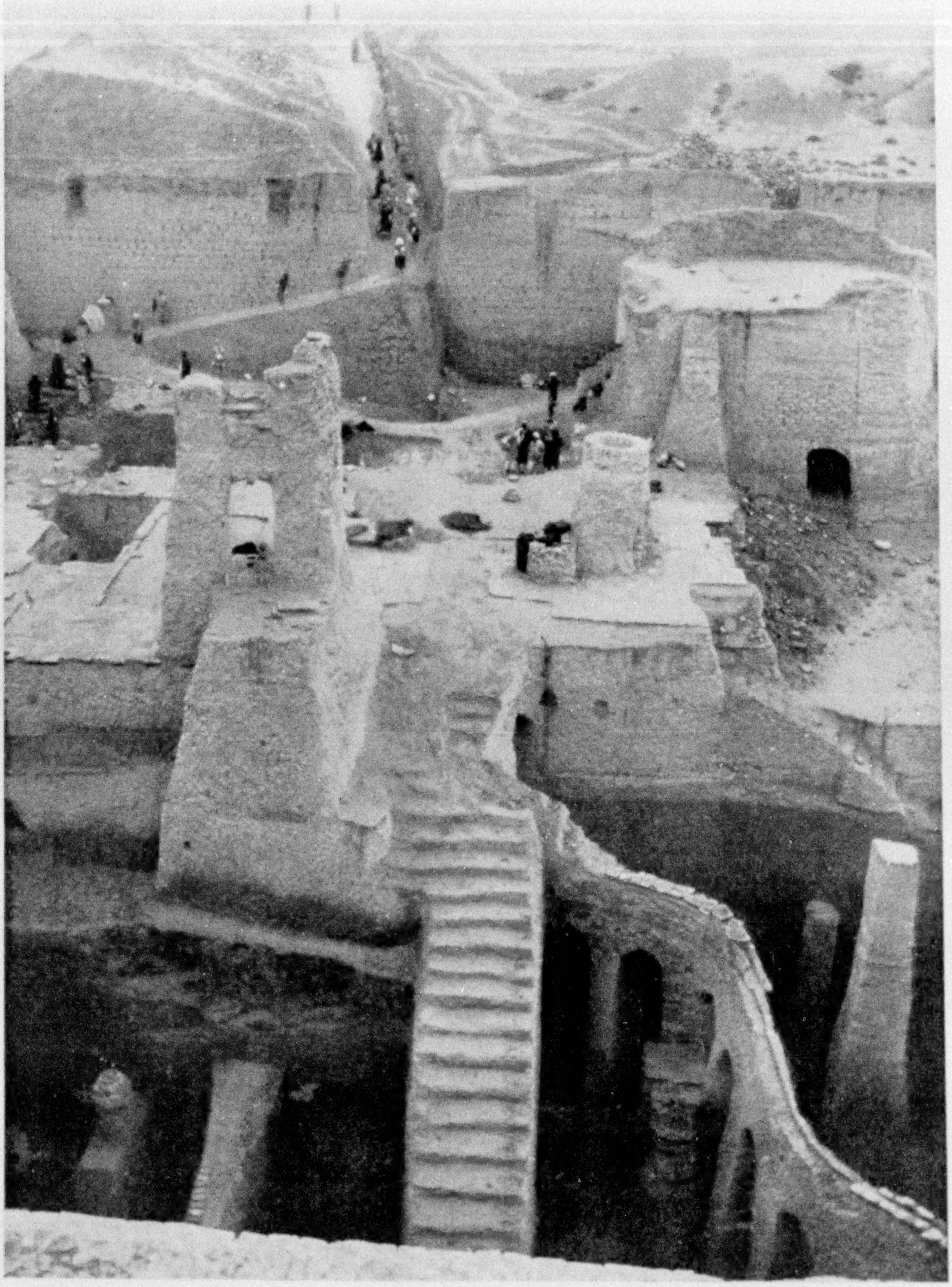
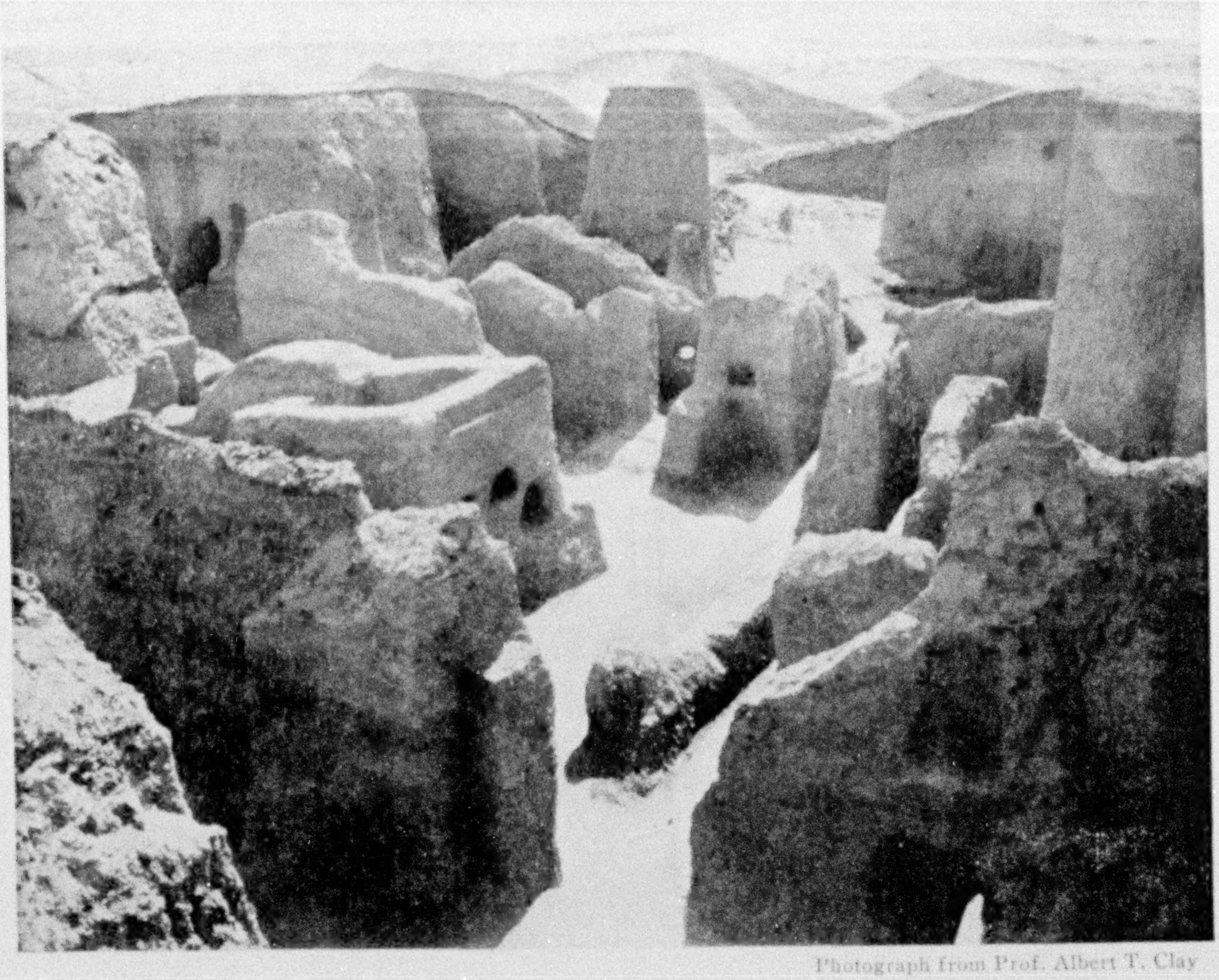


Photograph from Prof. Albert T. Clay

EXCAVATIONS IN THE TEMPLE AREA AT NIPPUR

The explorer of the future will be a digger rather than a hiker. The discoveries obtained by the pick and shovel are affording constant proof that the truth of history surpasses the fancy of romance, even though that romance may spring from the fertile imaginations of the people of the land of Harun-al-Rashid.

XUM



Photograph from Prof. Albert T. Clay

THE RUINS OF A LIBRARY BUILDING 4,000 YEARS OLD: NIPPUR

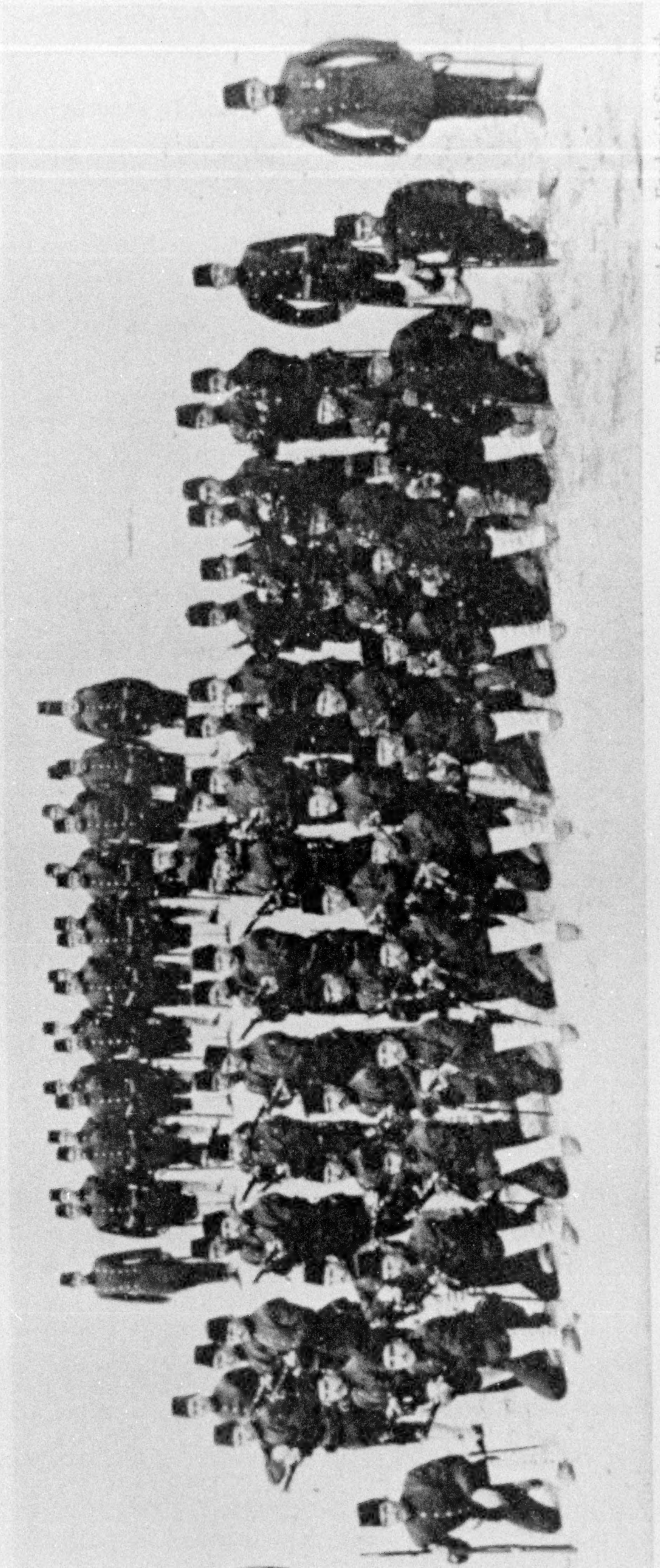
This library yielded to the pick and shovel of the explorer thousands of tablets written in days antedating the era of Abraham. More than seven hundred contract tablets were discovered in one building at a depth of 20 feet below the surface. The great care with which they had been made, the exceptionally pure and soft clay chosen, and the large number of fine seal impressions exhibited by them attracted the attention of the decipherer at once. Upon closer examination, they proved to belong to the business archives of a great Babylonian firm, Murashu Sons, bankers and brokers at Nippur, who lived in the time of Artaxerxes I and Darius II. This banking-house was to the Persian kings what the house of Rothschilds has been to England and that of Morgan to the United States.

with hepatoscopy and astrology, the two chief systems used by the Babylonian priest or "inspector" (baru)—that is, they divined the future by the inspection of the liver of the sacrificial animal and by the observation of the starry heavens.

The Babylonians, as also many other ancient and in fact even modern nations, believed that the liver represents the seat of the soul; and since, according to their notions, the soul included the mind as well as the heart, the inspection of the liver in the case of an animal that had become sacred by being offered to a deity furnished a means of ascertaining what the deity himself had in mind to do.

The observation of the heavens and the interpretation of unusual astronomical and meteorological phenomena also enabled them to determine the will of the deity. This method of divining seems to have been introduced into Babylonia later than liver divination.

One of the important results of cuneiform research is the new historical geography which has been reconstructed with its thousands of data. Hundreds of important cities have been identified among the partially inhabited or wholly deserted ruin hills of western Asia. An inscribed brick or a dated tablet, or perchance an inscribed cylinder found at a particular



Photograph from Frederick Simpich

TURKISH SOLDIERS: BAGDAD

Eighteen months ago many of these soldiers were Arab peasants, who knew nothing of military training

place, may have given the clue to the identification of the ancient city.

NEBUCHADNEZZAR DELVES INTO THE PAST

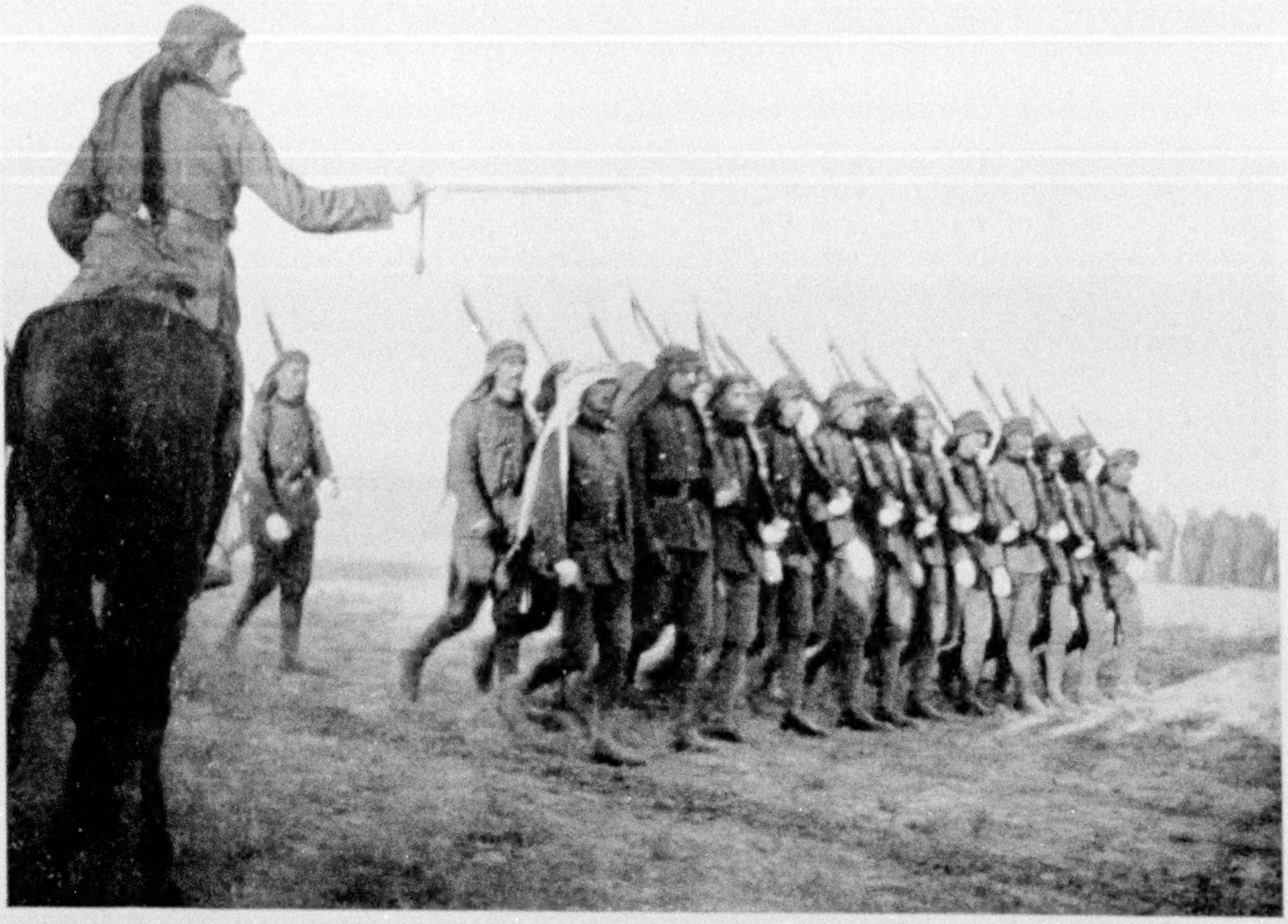
For example, on a cylinder found at Wana-Sedoum, now in the Yale Collection, which is one of several of its kind made by the royal scribe of Nebuchadnezzar (605-561 B. C.), the king recounts his restorations of various temples (page 183). In the closing lines he refers to his restoration of the temple of Lugal-Marada at Marad, a city which has not been hitherto identified, as follows:

"From distant days its old foundation stone no previous king had seen. Its old foundation stone I sought for, I beheld, and upon the foundation stone of King Naram-Sin, my ancient ancestor (who lived about 3750 B. C.), I laid its foundation. An inscription with my name I made and placed in the midst of it."

Recently there was also added to the Yale Collection an inscribed stone, written in the ancient script, which came from the same site as the Nebuchadnezzar cylinder, namely, Wana-Sedoum. It proves to be one of the stones of Naram-Sin which Nebuchadnezzar saw. It refers to the building of the temple of Lugal-Marada at Marad by a hitherto unknown son of Naram-Sin, namely, Libet-ili, who was then patesi of Marad. It reads:

"Naram-Sin, the mighty king of the four

XUM



Photograph from Frederick Simpich

TURKISH SOLDIERS OF BAGDAD

Note the strange head-dress of these soldiers. This "keffeya" is designated to protect the men from the fierce heat of the desert

quarters, the subduer of nine armies in one year, when those armies he overcame, and their kings he bound and brought before Enlil, in that day Libet-ili, his son, patesi of Marad, built the temple of Lugal-Marada in Marad. Whoever alters this inscribed stone may the god Shamash and Lugal-Marada tear out his estate and extermine his seed forever."

A THOUSAND SITES UNOPENED

Future maps of Babylonia will include the site of Wana-Sedoum, with its ancient name, Marad. The city is almost due west of Nippur, on the Euphrates, and a little south of west of Daghara. While many of the ancient sites of Babylonia have been identified, as Sippar, Babylon, Nippur, Erech, Larsa, Ur, Lagash, etc., and have been partially excavated, *hundreds in Babylonia and thousands in western Asia, with their ruin-hills practically untouched, retain their names as well as their secrets.*

Babylonia is covered with mounds of debris, the accumulations of millenniums. Mesopotamia, the ancestral home of the patriarchs, is completely dotted with these tells. And when we read in the historical inscriptions of the hundreds of sites which have not been identified, it is impossible even to surmise what marvelous revelations are in store when these ruin-hills are opened by the pick and spade.

Not long ago the Hittites were only known to us from the Old Testament. Now we know a mighty nation of Asia Minor sufficiently powerful to invade Babylonia a little later, 2000 B. C., and to be able to force Egypt later on, in the time of Rameses II, to make an inglorious treaty with them.

Not long ago Boghaskuei, one of its ancient capitals, with its ancient records written in cuneiform, was discovered (see NATIONAL GEOGRAPHIC MAGAZINE, February, 1910). Other sites are being excavated, and as a result the science of Hittitology is gradually being developed.

These Babylonian and Assyrian researches have had important bearings upon the Old Testament. It was largely the desire to secure inscriptions, by the help of which the historical value of the Hebrew Scriptures could be tested, that inspired many in the early years of these researches to support excavations.

EXPLORATION AND THE SCRIPTURES

Imagine the interest that was aroused when the first Assyrian inscription was deciphered, referring to events recorded in the Old Testament, or when George Smith announced that he had discovered among the tablets of the library of Ashurbanipal a portion of the deluge story which closely resembles the Biblical account.

Several creation stories have been handed down by the Sumerians and Babylonians. The one showing the greatest resemblance to the Biblical references to the creation in Genesis and in the poetical books was found in the library of Ashurbanipal. After depicting the conflict between Marduk, the god of light, and Tiamat, the primeval goddess of chaos, it says the heavens and the earth were created.

The Sumerian cosmology, found at Sippar, symbolizes the establishment of order out of chaos. Still another fragment of a creation story, written in Sumerian and found at Nippur, makes another goddess, Nintu by name, the creator.

ACCOUNTS OF THE FLOOD

Besides the eleventh tablet of the Gilgamesh epic found by George Smith, of the British Musuem, which contains the deluge story so closely resembling the Biblical account, several others have since been discovered. There is a Ninevite recension also in the British Museum and a fragment of an earlier copy.

Another, the oldest dated story of the flood, is in the library of the late J. Pierpont Morgan. It was written in the reign of Ammizaduga, a little later than 2000 B. C. This represents a god calling upon Adad, the weather god, to cause a destructive rainstorm, and Ea interposing in order to save the diluvian hero.

Several years ago a little fragment of another Semitic story was found in the University of Pennsylvania Collection, but more recently a Sumerian version, which makes Ziugidda of Shuruppak the hero of the flood.

It has been suggested that the Ziugidda tablet belongs to a series, fragments of which have been found, and that this series contained lists of kings who ruled before and after the deluge to the time that the tablet was written, indicating that perhaps it is a Babylonian history of the world.

Should this fragment prove to belong to such a series, it would be a striking parallel to the brief history of the world as found preserved in the Old Testament. An interesting feature of the tablet containing the reigns of kings is that a period of 32,234 years is claimed between the deluge and the last king of Isin, who lived a little before 2000 B. C. Just how many kings ruled in this period is not known. In the previous period, however—that is, between the creation and the deluge—Berosus (who lived about 300 B. C.) informs us ten primeval kings ruled for 432,000 years.

BIBLE STORY CORROBORATED

The Babylonian inscriptions have thrown a flood of light upon the patriarchal period. Although many modern critics have until recently declared the entire historical situation different from that found in the Old Testament, they are now forced to acknowledge it to be in strict accord with the many details gathered from the monuments. The actual personal existence of the patriarchs, however, is still held by these scholars to be completely disproved.

Other scholars, however, hold that, notwithstanding the fact that we have peered in vain for reference on the monuments to the patriarchs, inasmuch as all such details that we could expect to see corroborated have been in an almost remarkable manner, that there is every reason to believe that the patriarchs themselves were historical.

But not alone the patriarchal period thus receives new light, but so many archæological sidelights have been thrown upon the Old Testament that there is scarcely a page that has not been illuminated by them. Yes; it can be said that additional chronicles of the kings of Judah and Israel can be gathered from the Assyrian and Babylonian monuments.

These archæological discoveries, moreover, while illustrating and substantiating the historical value of much of the Old Testament records, also give rise at the same time to new historical and literary difficulties. It is found that the traditional view of the Old Testament must be modified very considerably—a knowledge of which, however, does not disturb the conception of the Old Testament as a religious book.

A HUNDRED BABYLONIAN RULERS PRIOR TO ABRAHAM

To cite a single instance: the Biblical chronology of the creation, whether we accept the Septuagint figures and make it 5500 B. C. or the Hebrew at 4000 B. C., cannot be harmonized with that which we know at present. The Old Testament gives a genealogy of ten names covering 427 years, according to the Hebrew, and 1,307 years, according to the Greek version, between the deluge and Abraham.

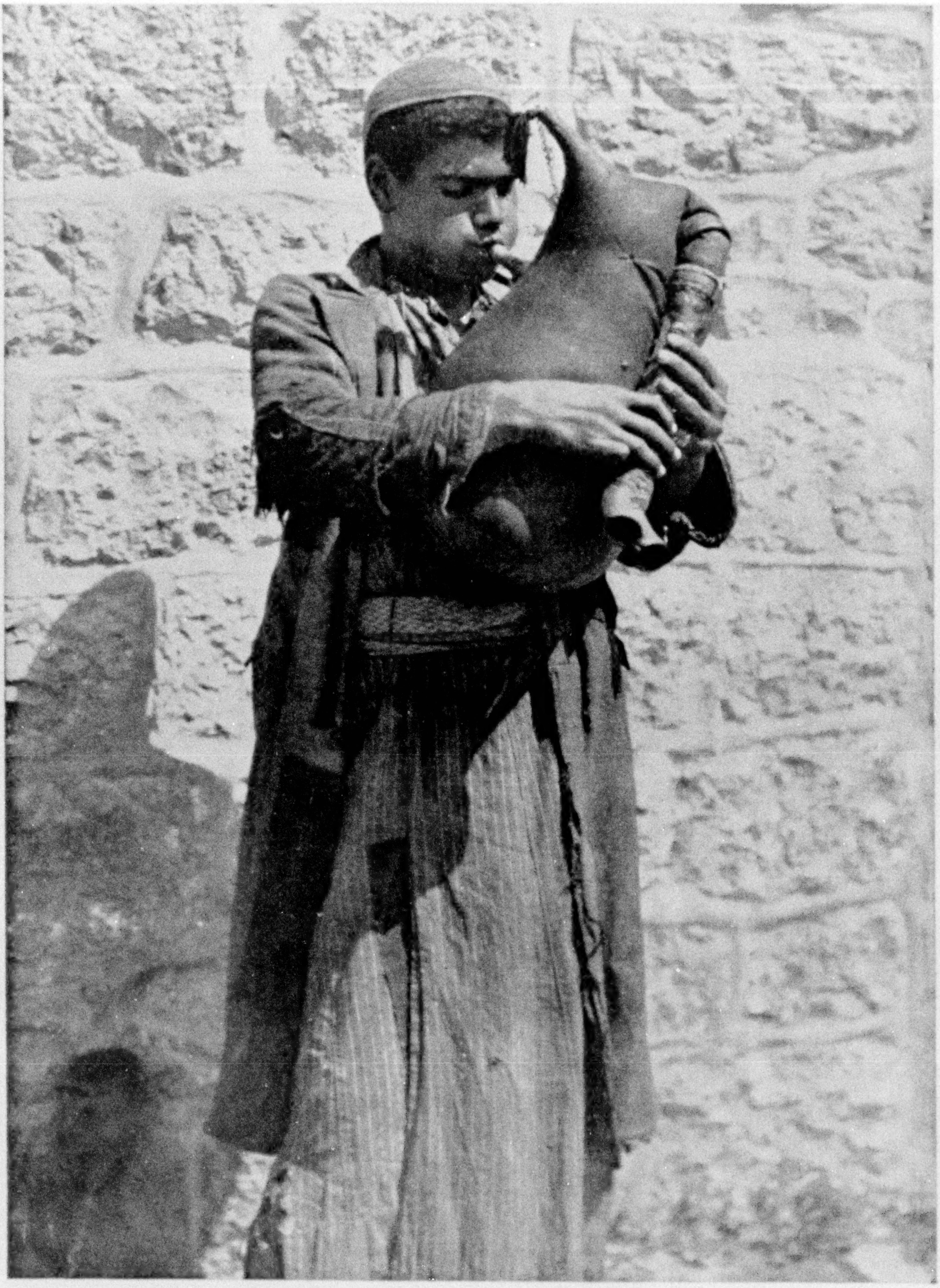
In order to show that the period was longer, it is only necessary to mention that about one hundred rulers of Babylonia prior to Abraham are now known, and how many more will be restored to history in the near future it is impossible to tell.

The work of uncovering the ruin-hills of Assyria and Babylonia is only in its infancy. The spade and the pick have only begun to dispel the darkness which has shrouded the mounds of these lands. Hundreds of ruins remain unnoticed and unrecorded, because many are low and insignificant, and yet some of them contain right beneath the surface remains of a hoary antiquity. Destroyed in some early epoch, the city perhaps was never rebuilt. Surprise upon surprise awaits the explorer.

Photograph from Prof. Albert T. Clay

A GROUP OF ARAB WORKMEN RESTING, WITH THEIR BASKETS FOR CARRYING OFF THE DEBRIS AND THEIR PICKS AND SHOVELS

"These researches have resulted in astounding revelations. Israel, instead of being one of the foremost nations of antiquity, is now found to have been a small power which had thrived in the late pre-Christian centuries and had occupied a comparatively insignificant position among the great nations of its age" (see text, page 164).



THE BAGPIPER

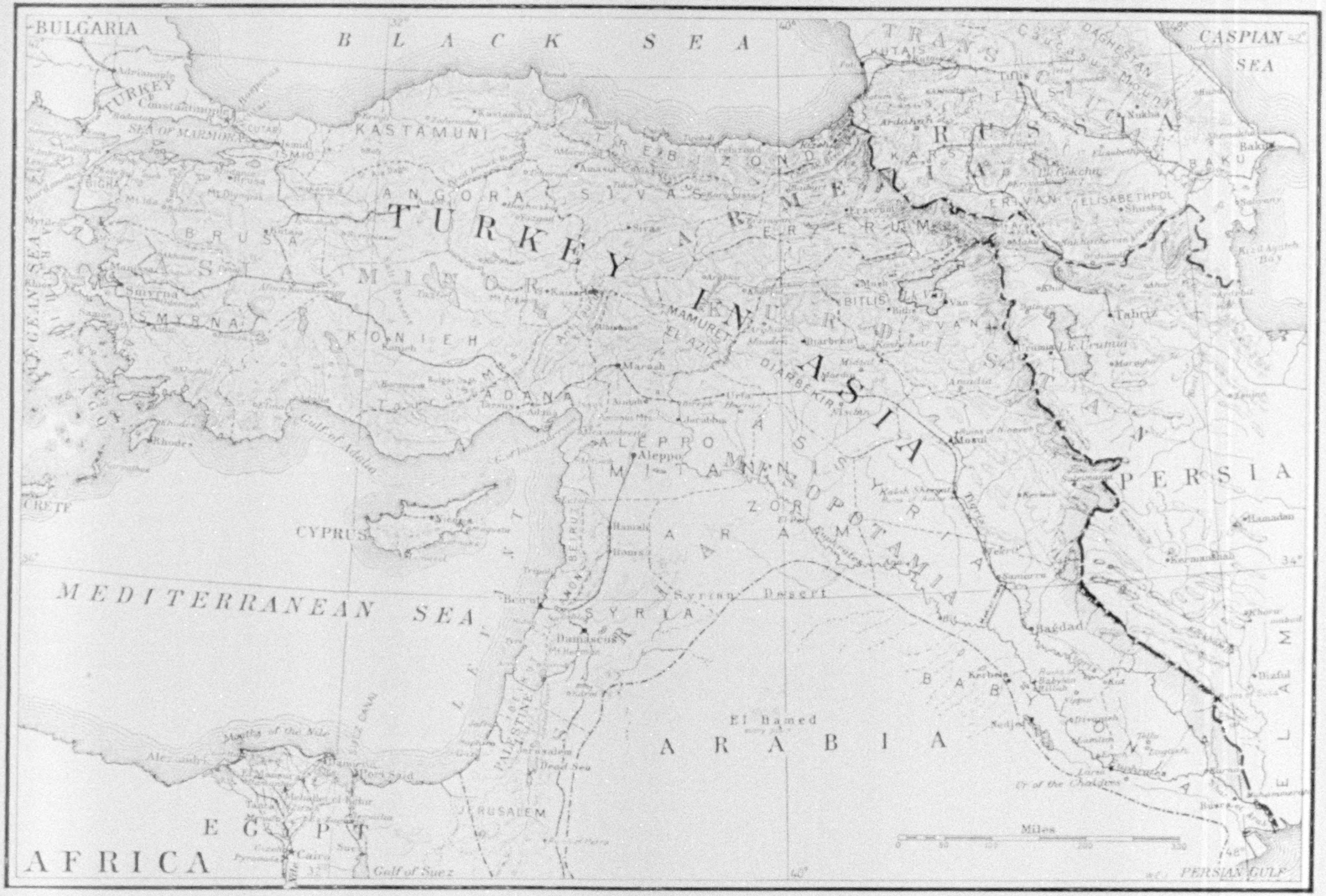
These musicians go about with animal shows among the cities and villages and are the delight of the children

Photo by the American Colony at Jerusalem

A DESCENDANT OF ABRAHAM

About one hundred rulers of Babylonia prior to Abraham are now known, and how many more will be restored to history in the near future it is impossible to tell. History's horizon has thus been pushed back two thousand years within the lifetime of thousands of the readers of this magazine.

XUM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TURKEY
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SIVAS
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TURKEY IN ASIA
ASIA MINOR
BRUSA
SMYRNA
Smyrna
KONIEH
ADANA
Gulf of Adalia
AEGEAN SEA
CRETE
CYPRUS
MEDITERRANEAN SEA
ARMENIA
ERZERUM
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OUTLINE MAP OF THE WORLD'S MOST HISTORIC LANDS

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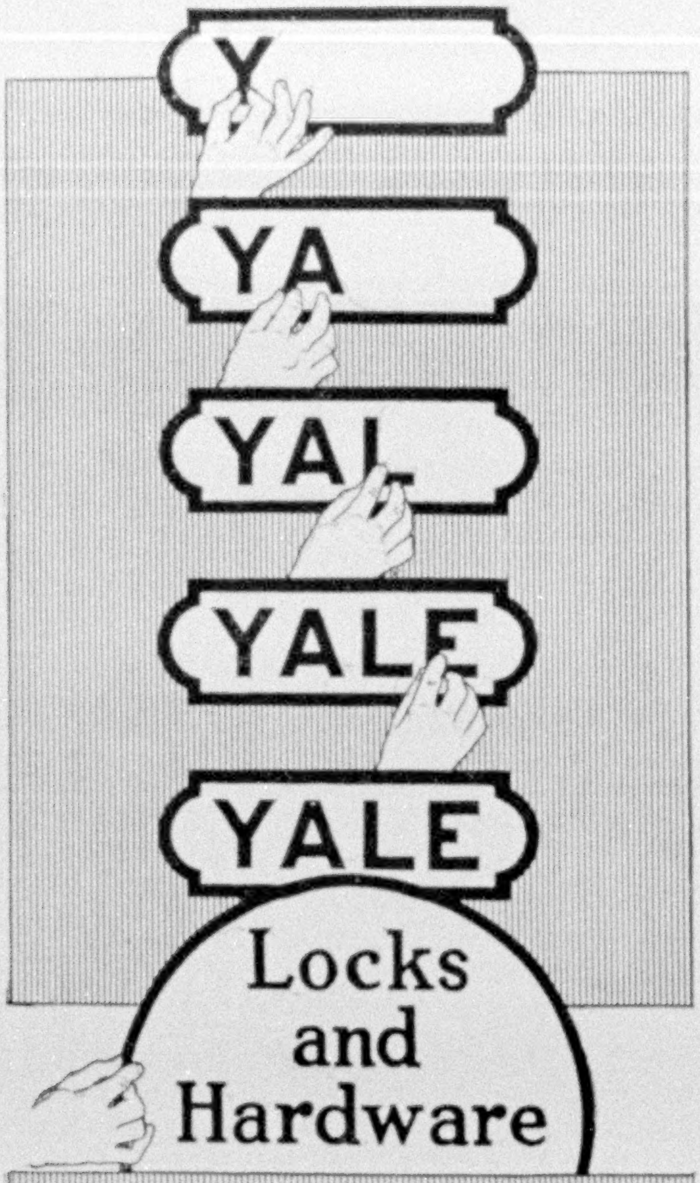
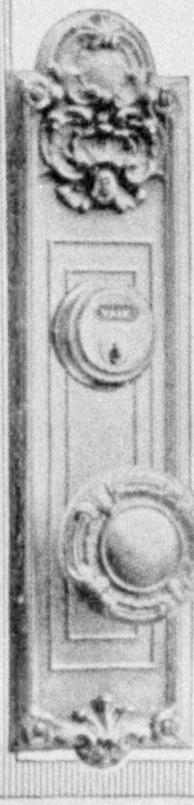


Deciding on Yale Locks and Hardware



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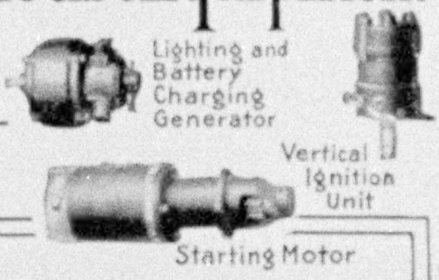

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- ‡Mitchel
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- *Pierce-Arrow
- *Pilot
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- ‡Renault
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- ‡Richard
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Westinghouse Electric & Manufacturing Company

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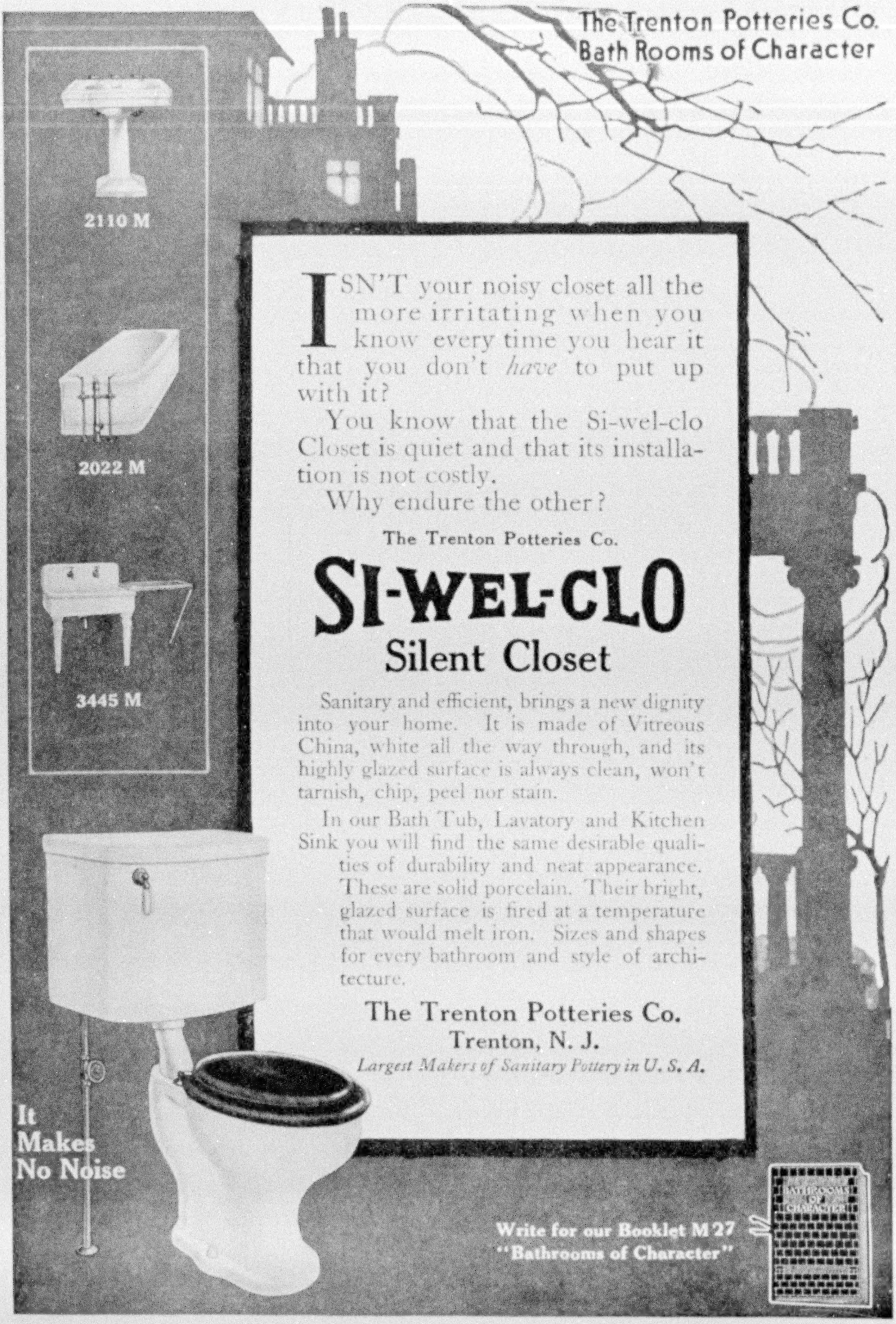
Resinol Soap is not artificially colored, its rich brown being entirely due to the Resinol medication it contains. Sold by all druggists and dealers in toilet goods. For a trial size cake free, write to Dept. 4-E, Resinol, Baltimore, Md.



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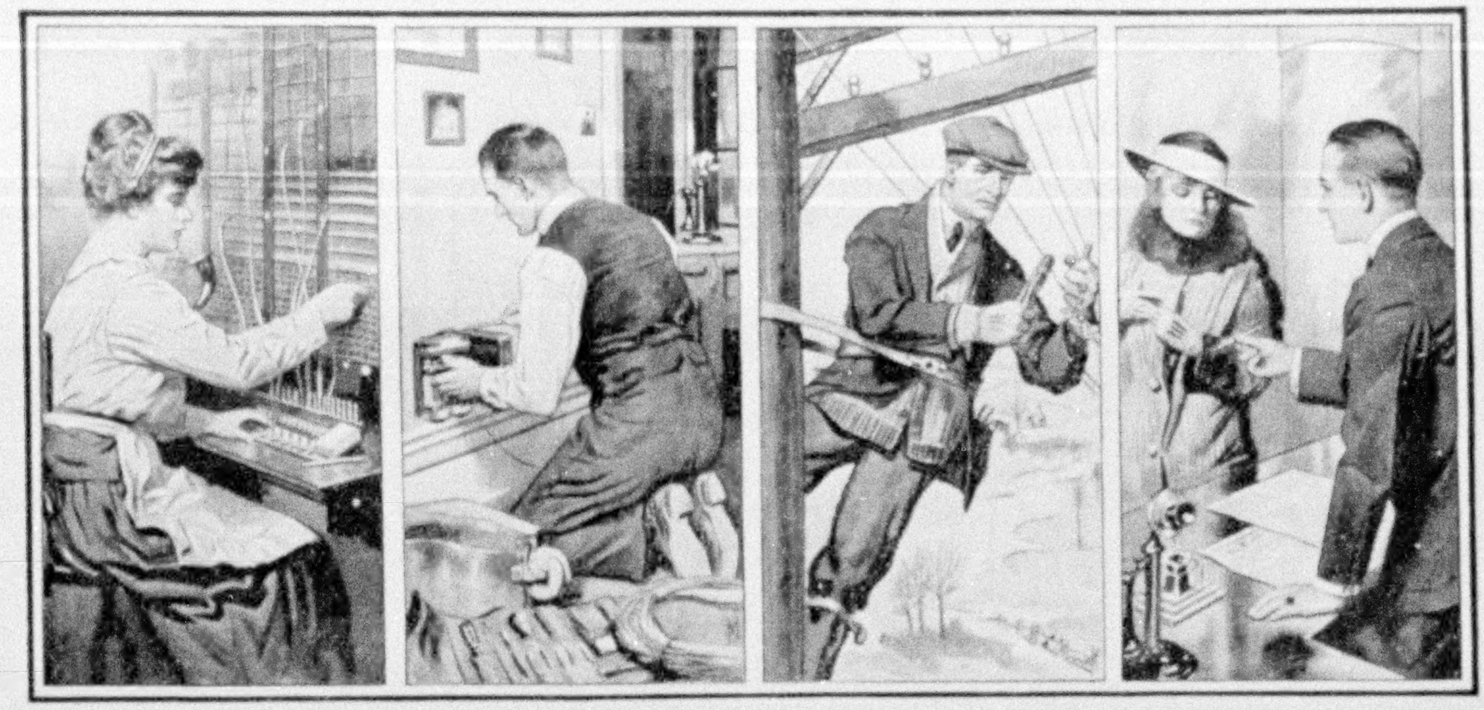

Operator Installer Lineman Clerk

The Picked Army of the Telephone

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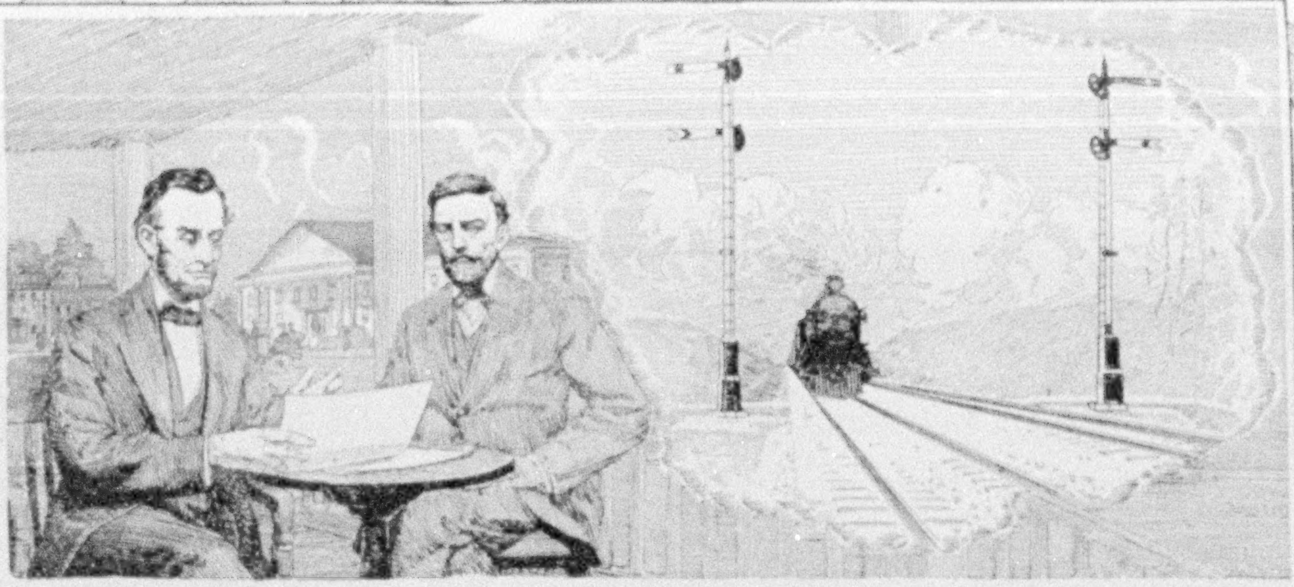
One Policy *One System* *Universal Service*



At Council Bluffs, Ia., in August, 1859, Abraham Lincoln learned from Gen. G. M. Dodge the facts which later caused him to urge the building of the Union Pacific—even when the country's resources were strained by war

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(196)

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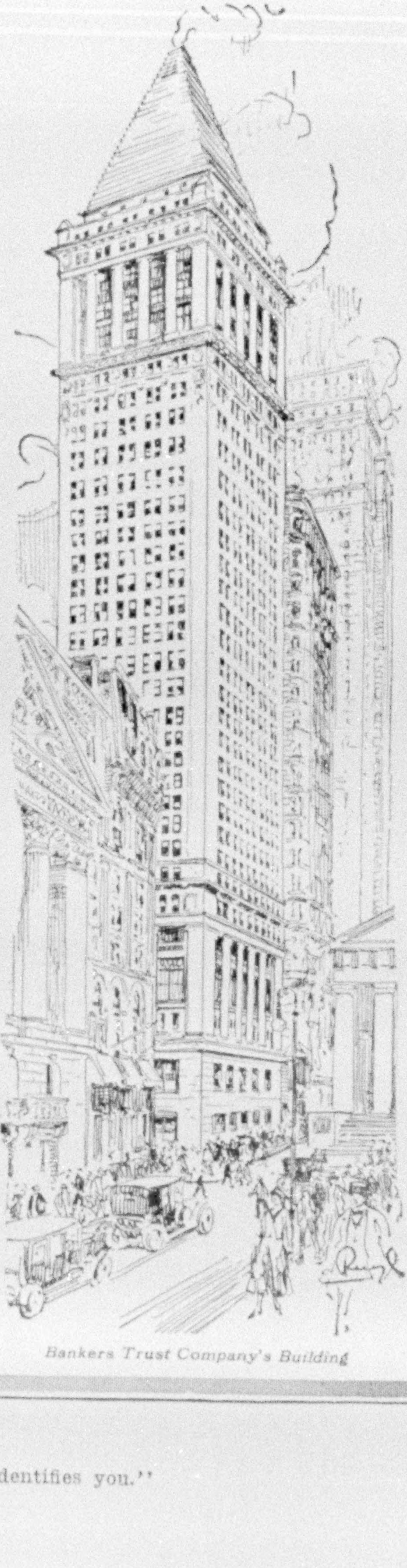

Bankers Trust Company's Building

Photo by George Shiras, 3rd

"GROUND DOVES AND A CARDINAL FEEDING"
(A miniature of one of the page illustrations)

Common Birds of Town and Country

114 Illustrations *in Colors* :: :: 52 in Black and White

"BIRDS OF TOWN AND COUNTRY" is illustrated by 114 life-like drawings in natural color, drawn especially for this purpose by the artist-naturalist, Louis Agassiz Fuertes. The descriptions of birds and their habits which accompany the pictures were written by a world-famous ornithologist, Dr. H. W. Henshaw, who has the gift of describing this department of biological science so clearly that the beginner can understand and enjoy it. Another attractive feature of this volume is an article by F. H. Kennard, illustrated by many unusual photographs, telling how to attract desirable birds to orchard and dooryard. The results of a life-long study, by Professor Wells W. Cooke, on the subject of bird-migration are likewise included in this volume, together with a splendid article on how birds follow the seasons, illustrated by sketches and maps of their routes.

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DEPT. H, NATIONAL GEOGRAPHIC MAGAZINE,
16th and M Streets, Washington, D. C.

...., 1916.

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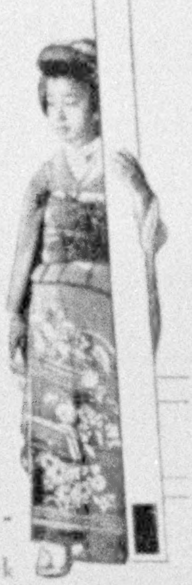

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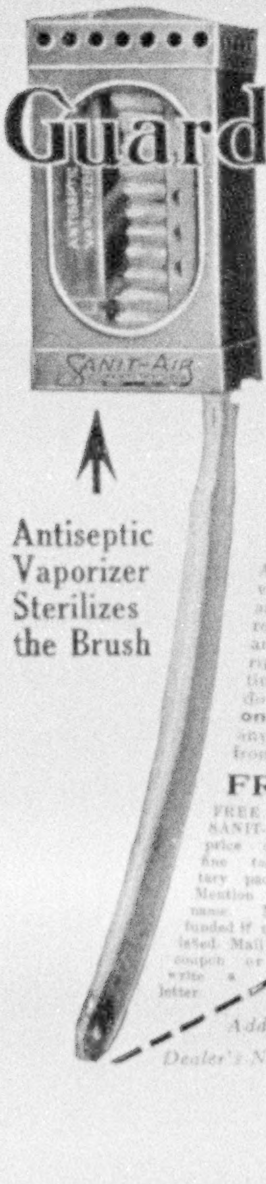

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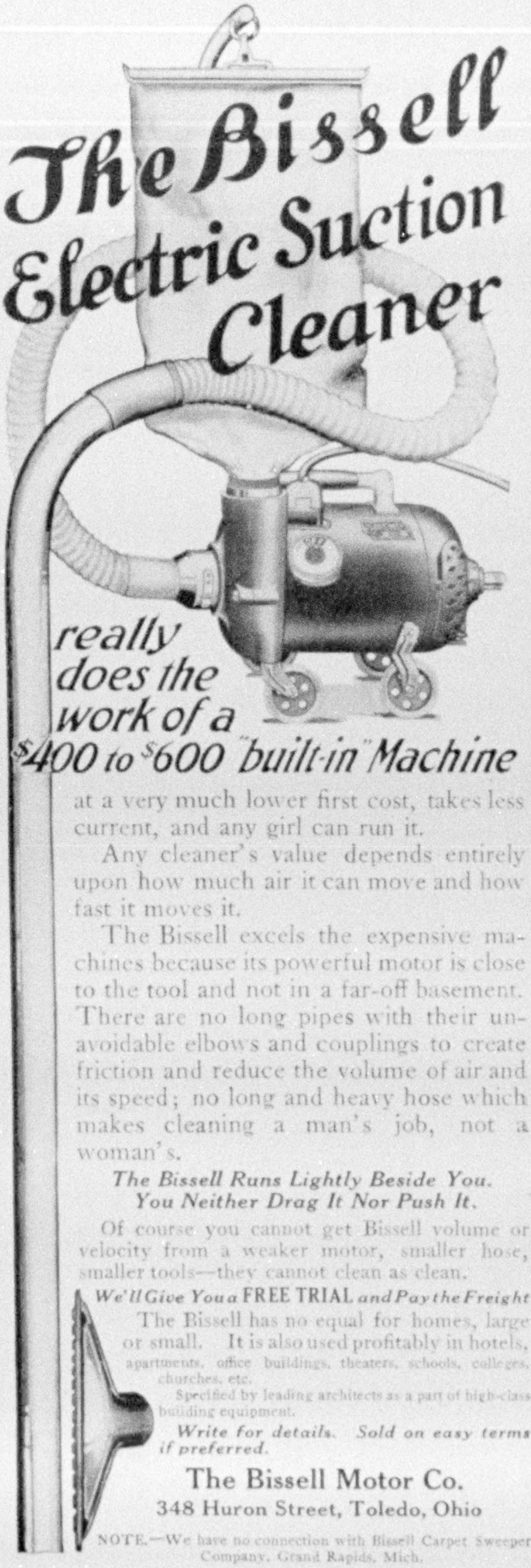

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WASHINGTON, D. C.

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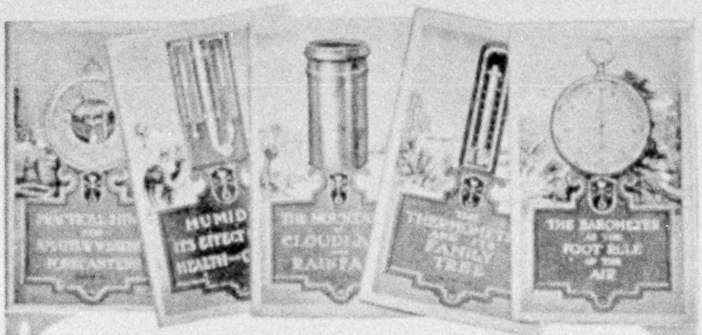

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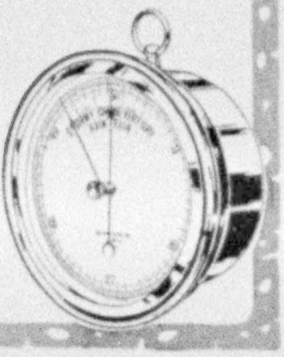

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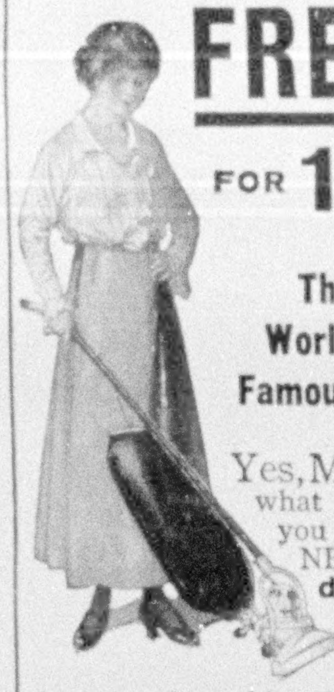

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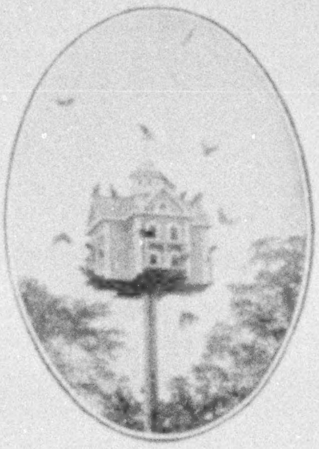

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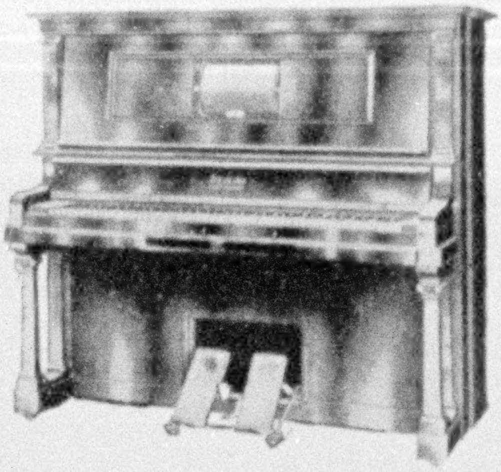

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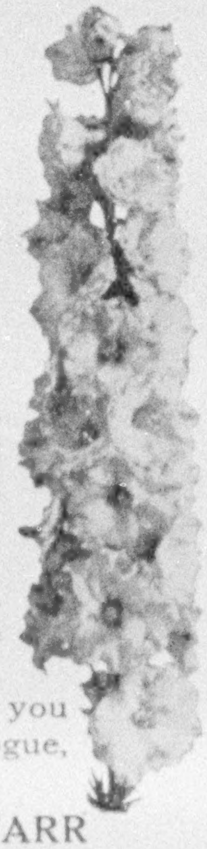

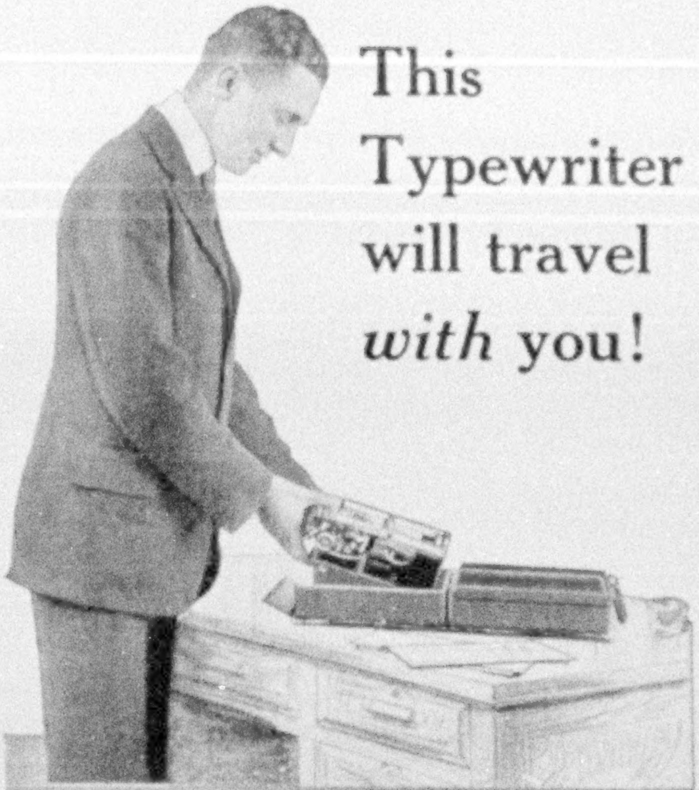

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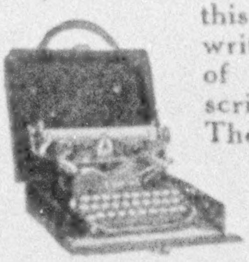

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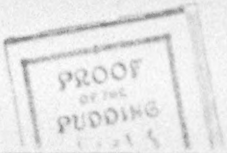

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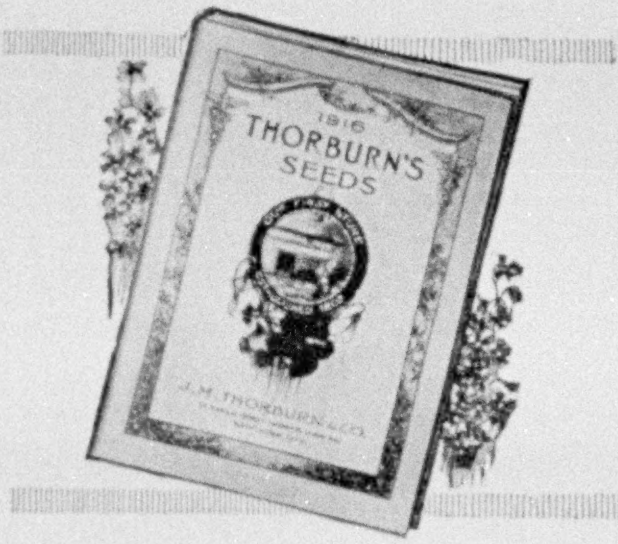

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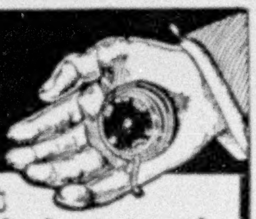

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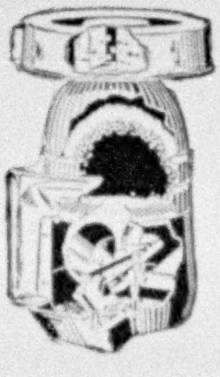

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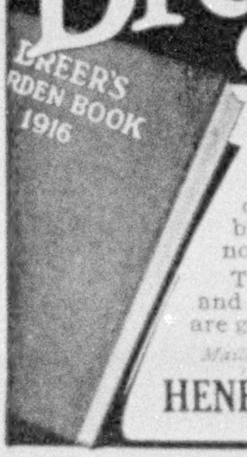

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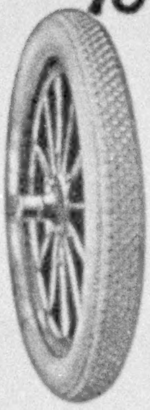

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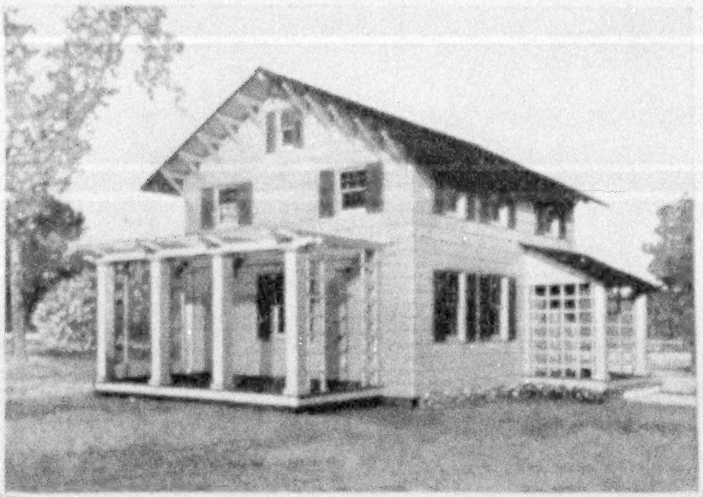

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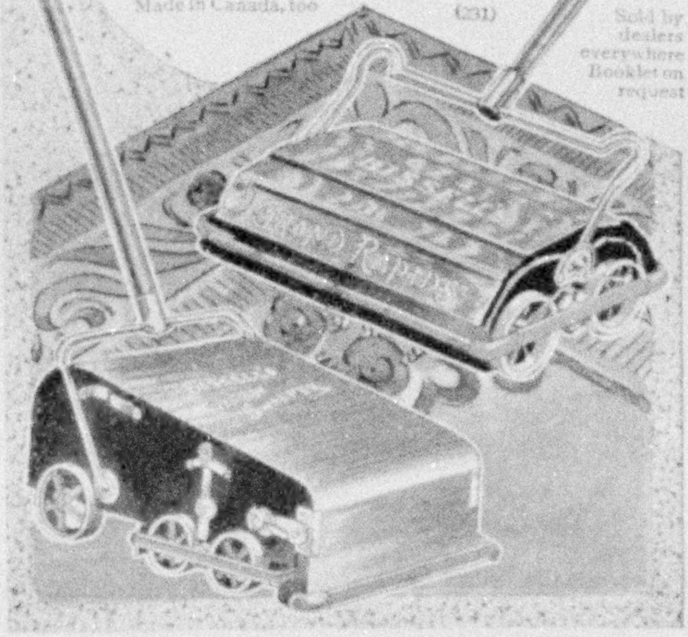

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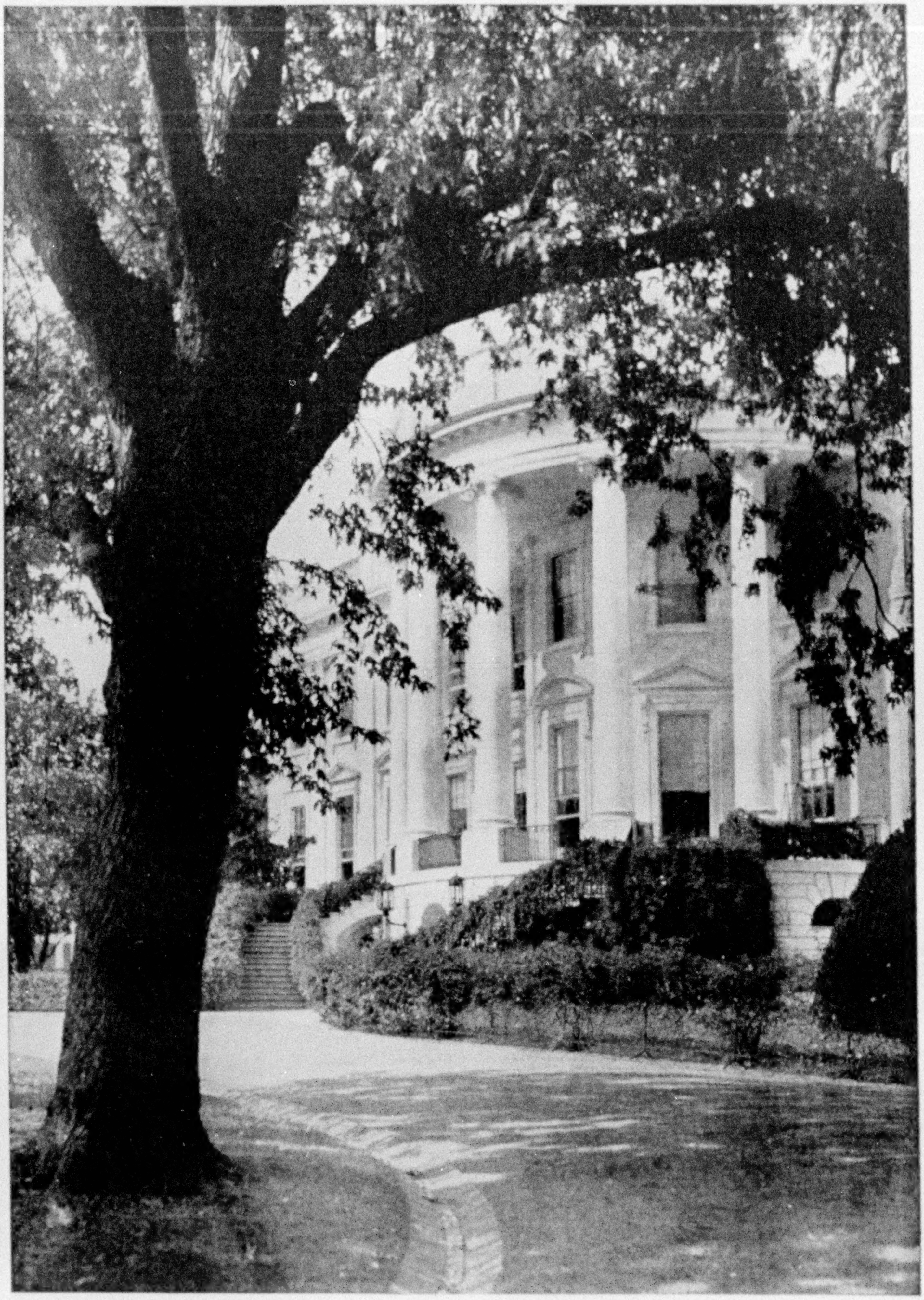

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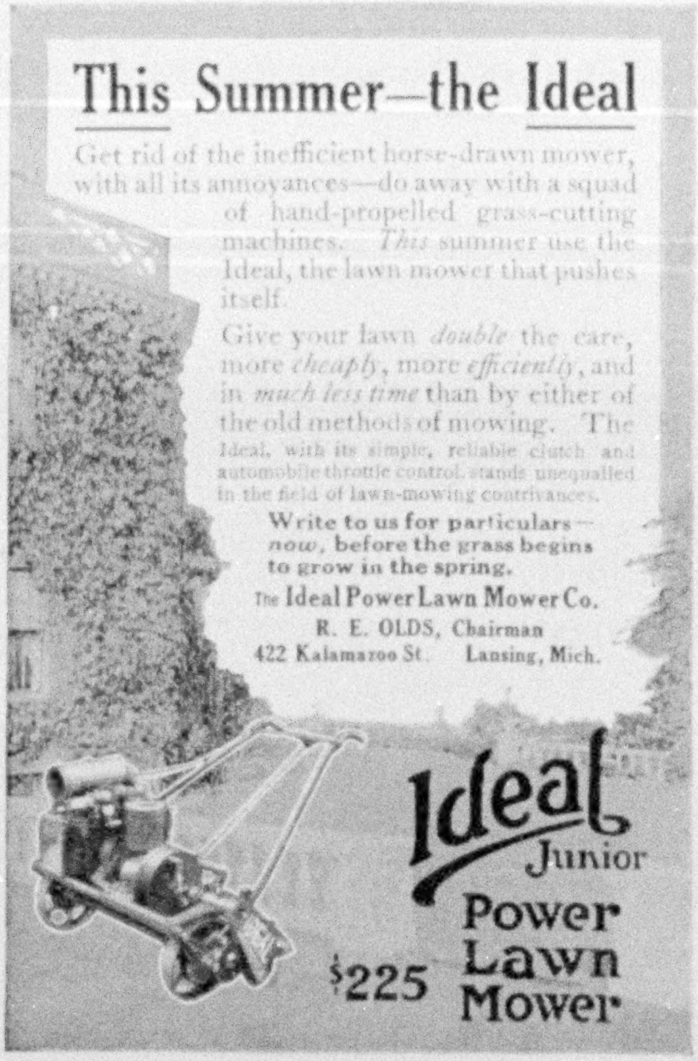

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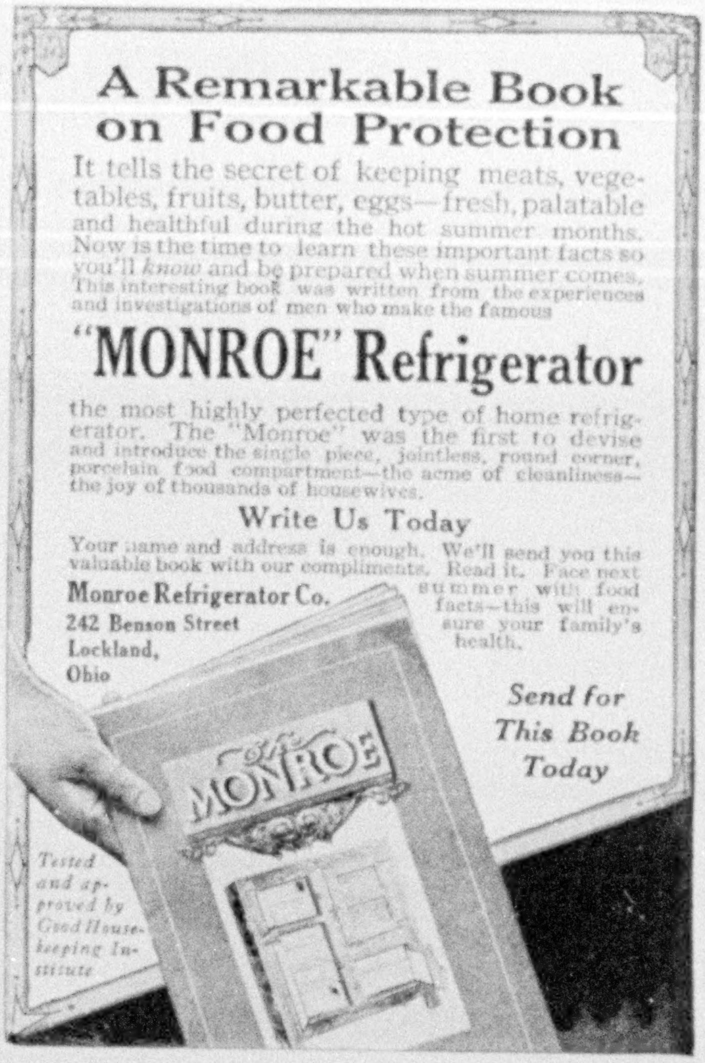

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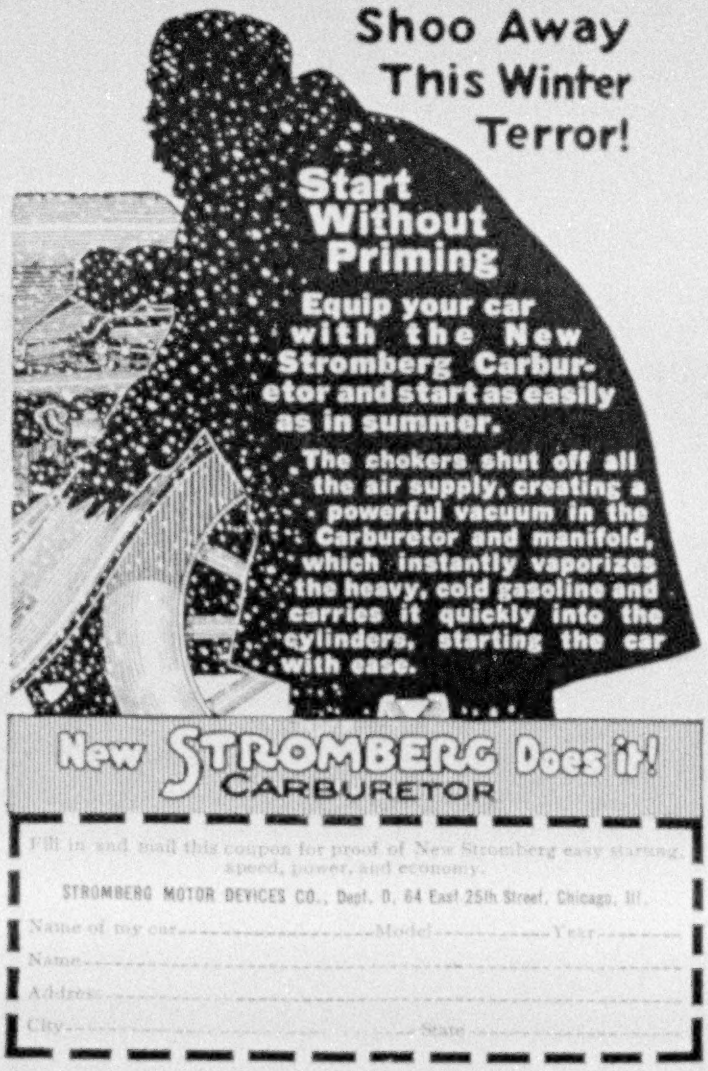

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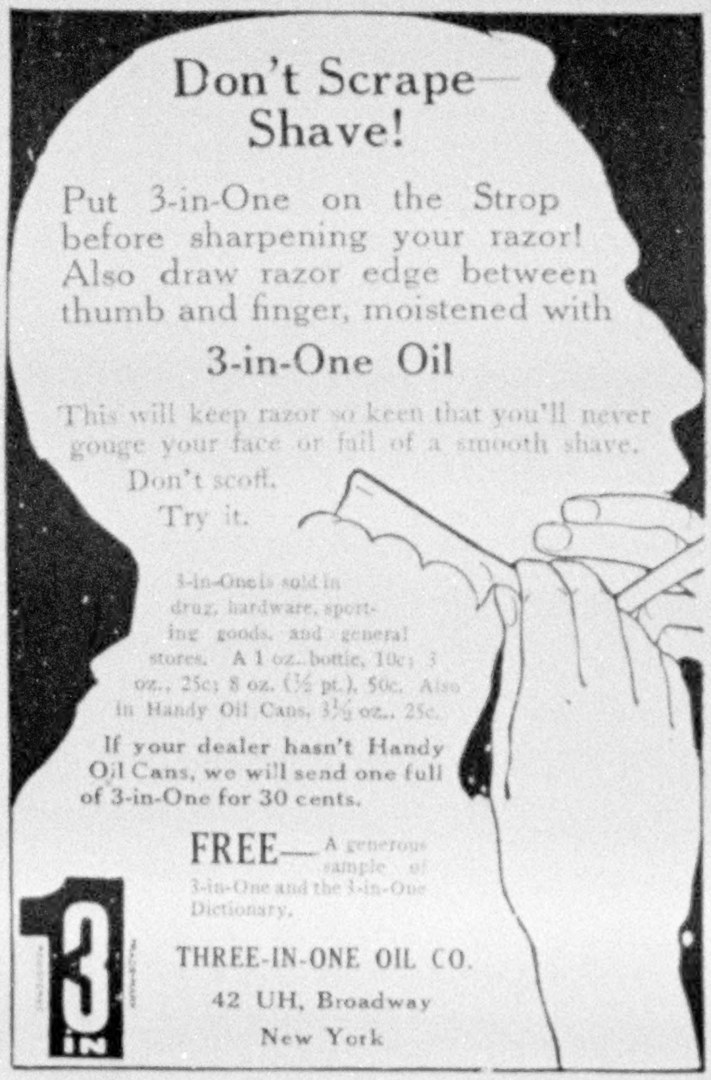

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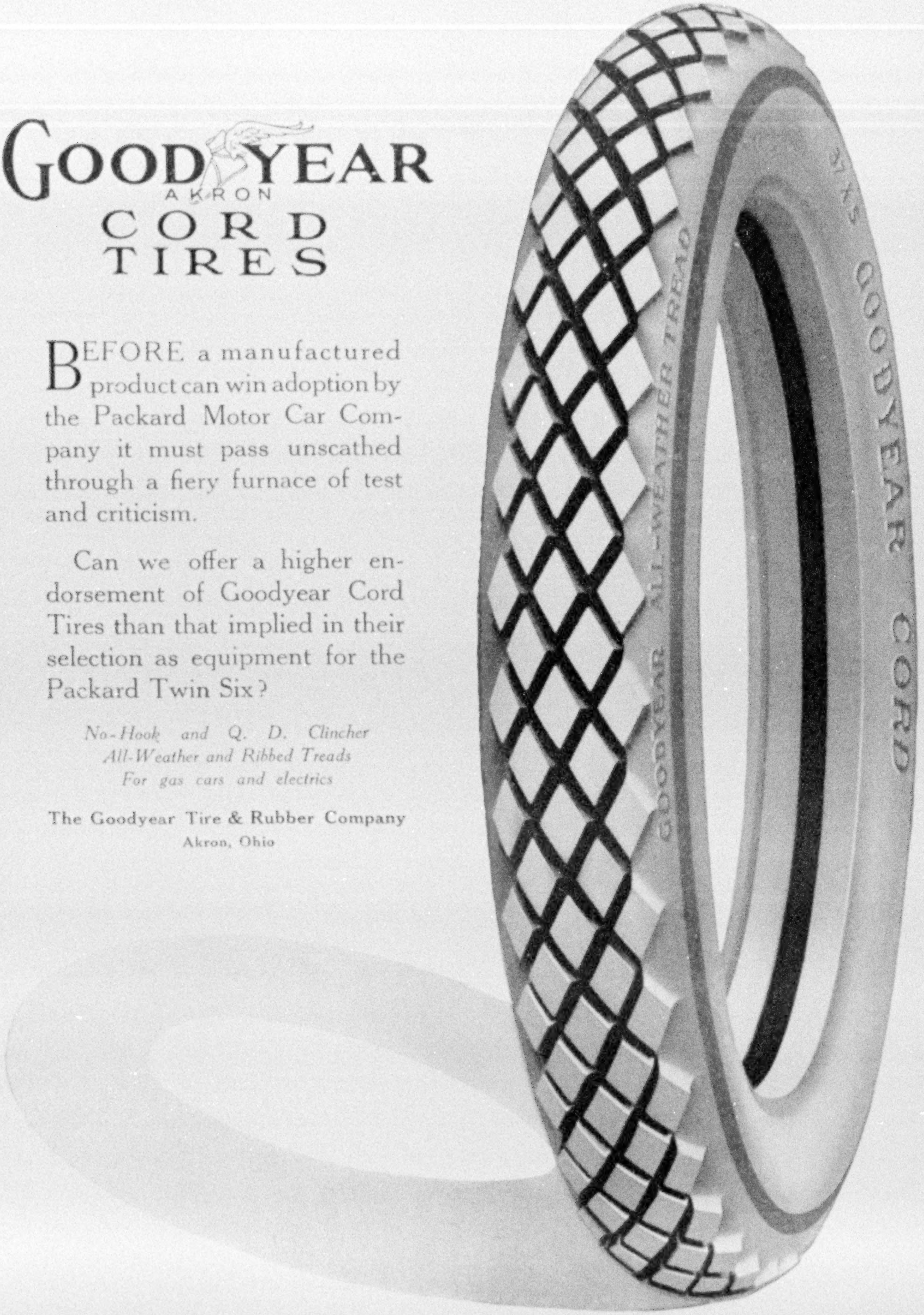

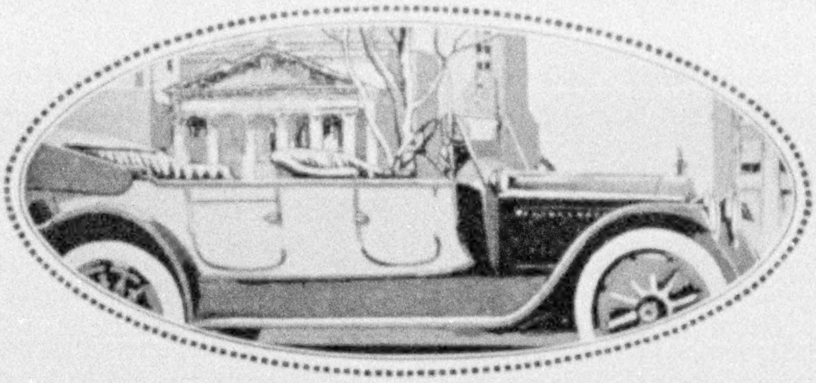

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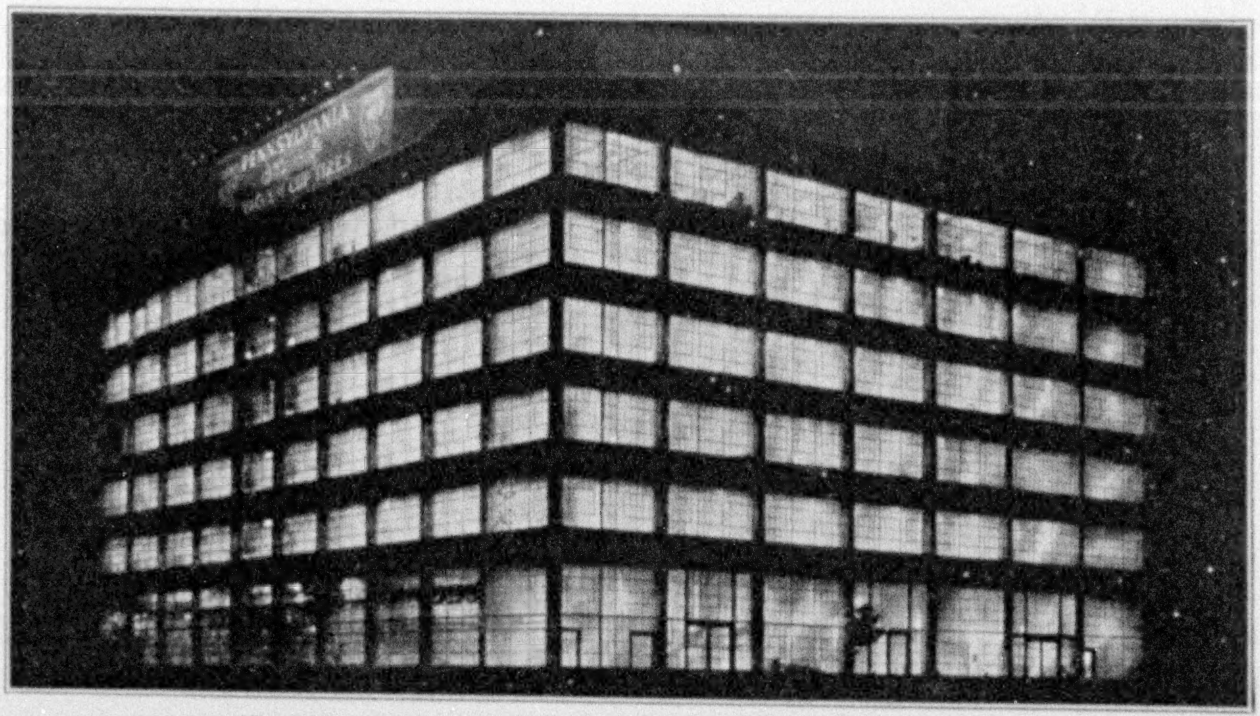

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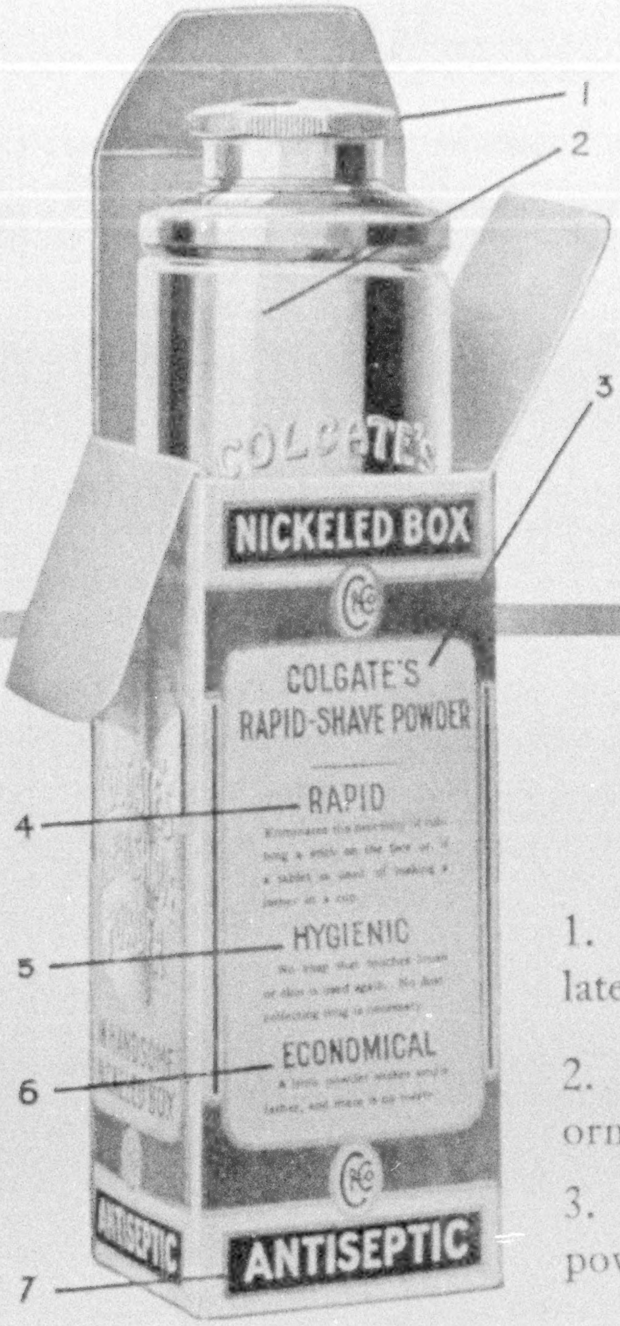
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